

REFERENCE

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# SUBJECTS

Key to subjects indicated by numbers against the names of research workers.

1. Directors and Superintendents of Agriculture, Forestry or Veterinary Science, Directors of General Agricultural, Forestry or Veterinary Research Institutes or Experiment Stations.
2. Soils, Fertilisers, Plant Nutrition.
3. General Botany and Plant Physiology.
4. Plant Breeding.
5. Plant Chemistry.
6. Plant Pathology (not classified under 19—21).
7. Arable Crops.
8. Grassland, Herbage and Fodder Plants.
9. Horticulture.
10. Forestry—Silviculture and Management.
11. Forest Products (Major and Minor) and Utilisation.
12. Plant Husbandry (not classified under 2—11 and including Seeds and Weeds).
13. Animal Anatomy and Physiology.
14. Animal Breeding.
15. Animal Nutrition.
16. Animal Pathology (not classified under 19—23).
17. Animal Production (including Dairying).
18. Animal Husbandry (not classified under 13—17).
19. Entomology.
20. Mycology.
21. Helminthology.
22. Bacteriology, Viruses and related Immunology.
23. Protozoology.
24. General Chemistry.
25. Biochemistry.
26. Climatology.
27. Economics.
28. Engineering.
29. Statistics.
30. Preservation and Transport.

## ERRATUM

Page 50, under Great Britain, *for* F. R. Stubbs *read* F. R. Tubbs.

# INTRODUCTION

The List contains the names and addresses and, where information has been supplied, also the telephone numbers, of agricultural and forestry research workers (including veterinary research workers) up to the end of 1949, with an indication generally of the lines of study in which each worker is specially interested.

Opportunity has been taken, as a result of suggestions received from various sources, to expand and re-arrange the subject list and, for the convenience of those who use the publication, to display the Key numbers more prominently (see pages 3 and 312). Any suggestions for the further improvement of the subject list would be welcomed.

The volume is divided into six parts. Parts A and B comprise the List ; parts C, D, E and F are indices to the List.

Part A gives details for Commonwealth Institutes and Bureaux concerned with the distribution of scientific information among research workers and in addition particulars for the Bureau of Biological Control, the Potato Collection and the Bureau of Tropical Hygiene ; Part B gives by countries the names and addresses of research workers. In both these parts, the subject in which an officer is interested is indicated by a Key number ; also, in most cases, a brief description of the special work on which he is engaged.

Part C is an index of the pages in the List in which details are to be found of workers in different subjects arranged under countries ; Part D is an index of the pages in the List in which details are to be found of workers in different subjects arranged under Key numbers. Part E is an alphabetical index of the names of workers, and Part F, which is a new feature, is an index of institutions mentioned in the List.

The particulars given in this publication have been compiled from information supplied by the Governments and authorities concerned. Errors, where they occur, may be brought to notice.

Particulars of research stations will, it is hoped, be issued in the near future as a supplement to this list.

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COMMONWEALTH AGRICULTURAL BUREAUX,  
EXECUTIVE COUNCIL,

2, QUEEN ANNE'S GATE BUILDINGS, S.W.1.

January 10, 1950.



# COMMONWEALTH BUREAUX



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ANGLO-EGYPTIAN SUDAN

The Chief of the Research Division, Department of Agriculture and Forests, Wad Medani, Sudan.

REPUBLIC OF IRELAND

M. J. Barry, Department of Agriculture, Dublin.

Institutes

COMMONWEALTH INSTITUTE OF ENTOMOLOGY

British Museum (Natural History), Cromwell Road, London, S.W.7; Tel.: Kensington 6323. Publication Office and Library, 41, Queen's Gate, London, S.W.7. Tel.: Western 4341.

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| G. E. Bryant, <i>Entomologist</i> (part-time worker).                                    | 19      |
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| G. R. Bisby, Ph.D., <i>Senior Assistant Mycologist</i> : uredinae; systematic mycology.                | 6, 20   |
| Grace M. Waterhouse, M.Sc., <i>Sub-Editor</i> : aquatic phycomycetes.                                  | 20      |
| S. J. Hughes, M.Sc., <i>Assistant Mycologist</i> : fungi imperfecti; ascomycetes; systematic mycology. | 6, 20   |
| M. B. Ellis, B.Sc., <i>Assistant Mycologist</i> : fungi imperfecti; ascomycetes; systematic mycology.  | 20      |

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Institute of Animal Genetics, King's Buildings, West Mains  
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(e) EUROPEAN STATION, 139 Seestrasse, Feldmeilen, Zurich, Switzerland.

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#### UNIT OF PLANT BIOCHEMISTRY

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A.R. H. Trim, B.A., Ph.D.

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19

A. D. Lees, M.A., Ph.D.

19



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| A. H. Sykes, B.A.  |               |

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(at Molteno Institute, Cambridge).

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| J. H. Sang, B.Sc., Ph.D., <i>Geneticist</i> .                    | 13, 14, 25 |
| R. A. Beatty, M.A., <i>Embryologist/Geneticist</i> .             | 13, 14, 25 |
| G. R. H. Bishop, M.Sc., N.D.A., N.D.D.                           | 14, 17     |
| H. G. Callan, B.A., Ph.D., <i>Geneticist/Cytologist</i> .        | 14, 25     |
| D. S. Falconer, B.Sc., Ph.D.                                     | 14, 17     |
| E. C. R. Reeve, B.A., Ph.D.                                      | 14, 17, 29 |
| J. M. Rendel, B.Sc., Ph.D.                                       | 14, 17, 29 |
| A. Robertson, B.A.   | 14, 17, 29 |
| Forbes W. Robertson, B.Sc., Ph.D.                                | 14, 29     |
| J. F. Robinson, B.Sc.  | 14, 17     |
| I. L. Mason, B.A.  | 14, 17     |
| I. H. Heaney, M.Sc.  | 14, 17     |
| G. Weiner, B.Sc.   | 14, 29     |

} *Geneticists*

## UNIT OF ANIMAL REPRODUCTION

(at School of Agriculture, Cambridge).

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| A. Walton, Ph.D., <i>Deputy Director</i> .                          | 1, 13 |
| J. L. Hancock, B.V.Sc., M.R.C.V.S.                                  | 13    |
| R. Pomeroy, M.A.  | 13    |
| Miss C. H. Brown, Ph.D.   | 13    |
| M. W. H. Bishop, M.A.   | 13    |
| Miss U. Parsons, B.A.   | 13    |

## POTATO STORAGE INVESTIGATIONS

(School of Agriculture, University of Nottingham, Sutton Bonington, Loughborough, Leics.)

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|----------------------------|-------|
| A. R. Wilson, M.Sc., Ph.D. | 6, 20 |
| R. K. McKee, B.A.          | 6, 20 |
| E. F. Collingwood, B.Sc.   | 6, 22 |

## GREAT BRITAIN

Subject

### OTHER SCIENTIFIC STAFF.

- |   |             |
|---|-------------|
| R. P. Tew, A.R.I.C. (at Agricultural Research Council Headquarters) Insecticide Standing Conference and Research and Development Co-Ordinating Committee.                             | 19, 20, 24  |
| V. H. Booth, B.A., Ph.D. (Vitamin Assays) at the Dunn Nutritional Laboratory, Milton Road (Field Laboratory), Cambridge.  | 4, 5, 8, 25 |
| J. Allan Campbell, B.Sc., Ph.D., M.R.C.V.S. (Agricultural Entomology), at the Department of Agricultural and Forest Entomology, Edinburgh University, 10, George Square, Edinburgh 8. | 19          |
| H. Gleen, B.Sc., Ph.D. (Soil Investigations) at Long Ashton Research Station, Long Ashton, Nr. Bristol.   | 2, 22, 25   |
| T. R. R. Mann, M.D., Ph.D. (Problems of Fertility and Sterility) at the Molteno Institute of Biology and Parasitology, University of Cambridge.                                       | 14, 25      |
| Mrs. D. H. E. Oxford, B.A. (Soil Actinomycetes) at Rothamstead Experimental Station, Harpenden, Herts.  | 2, 6, 22    |
| C. Barclay, M.A. (Development of studies of mineral deficiencies in Fenland soils), at the School of Agriculture, Cambridge.  | 3           |
| H. L. G. Stroyan, M.A. (Taxonomic work on British insects of agricultural importance) at the Department of Zoology, University of Cambridge, Downing Street, Cambridge.               | 19          |

## ENGLAND AND WALES

### State Institutions

### MINISTRY OF AGRICULTURE AND FISHERIES

#### Veterinary Laboratory

New Haw, Weybridge, Surrey.

- |  |                   |
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| Professor T. Dalling, M.A., M.R.C.V.S., F.R.S.E., <i>Director</i> .      | 1, 13, 16, 22, 23 |
| A. W. Stableforth, D.Sc., M.R.C.V.S., D.V.S.M., <i>Deputy Director</i> . | 22                |

#### SENIOR RESEARCH OFFICERS

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|--|----|
| T. M. Doyle, F.R.C.V.S., D.V.S.M., : bacteriology.                                   | 22 |
| E. L. Taylor, D.V.Sc., M.R.C.V.S., D.V.H., N.D.A., N.D.D. : parasitology.            | 21 |
| H. H. Green, O.B.E., D.Sc. (Glas.), D.Sc. (h.c. S. Africa), F.R.I.C. : biochemistry. | 25 |
| N. Dobson, B.Sc., M.R.C.V.S., F.R.S.E. : poultry diseases.                           | 22 |
| J. M. L. Penhale, M.R.C.V.S. : diagnosis and general.                                | 22 |
| N. H. Hole, B.Sc., M.R.C.V.S. : pathology.   | 16 |

#### SENIOR RESEARCH OFFICERS GRADE II

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|---|----|
| J. R. Lawson, M.R.C.V.S. : bacteriology.                                | 22 |
| G. Slavin, M.R.C.V.S., Dr.Vet.Med. (Leipzig) : bacteriology.            | 22 |
| E. C. Hulse, B.Sc., M.R.C.V.S. : bacteriology.                          | 22 |
| H. N. Spears, M.R.C.V.S. : bacteriology                                 | 22 |
| J. D. Blaxland, M.R.C.V.S. : poultry diseases : diagnosis and vaccines. | 22 |



|  |               |
|--|---------------|
| F. D. Asplin, M.R.C.V.S., Dip. Bact. (Vict.) : poultry diseases, research. | Subject<br>22 |
| J. L. McGirr, B.Sc., M.R.C.V.S. : biochemistry.                            | 22            |
|  | 25            |
| <b>RESEARCH OFFICERS</b>   |               |
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| R. N. T. Langridge, M.R.C.V.S.   | 22            |
| P. Stuart, B.Sc., M.R.C.V.S.   | 22            |
| A. Chodkowski, M.R.C.V.S., Dr. Med. Vet. (Lwow).                           | 22            |
| L. M. Markson, M.R.C.V.S. : pathology.                                     | 16            |
| T. E. Gibson, M.V.Sc., M.R.C.V.S.  | 21            |
| A. E. Pierce, M.R.C.V.S., D.V.S.M.   | 21            |
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| Mrs. R. Allcroft, Ph.D., B.Sc. (Agr.), N.D.A.                              | 25            |
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| M. L. Burdin, B.Sc., M.R.C.V.S.  | 25            |
| R. M. Loosmore, B.V.Sc., M.R.C.V.S. : diagnosis and general.               | 22            |
| <b>RESEARCH ASSISTANT</b>  |               |
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| <b>DIVISIONAL INSPECTOR</b>  |               |
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| <b>AGRICULTURAL RESEARCH COUNCIL—RESEARCH WORKERS</b>                      |               |
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| Dr. J. Zweig, M.R.C.V.S., M.V.Dr. (Brno.) : bacteriology.                  | 22            |
| F. W. Withers, M.A., M.R.C.V.S. : bacteriology.                            | 22            |
| F. B. Leech, B.Agr., M.R.C.V.S. : biochemistry.                            | 25            |
| S. B. Kendall, B.Sc., M.R.C.V.S. : parasitology.                           | 21            |
| J. MacLeod, D.Sc., Ph.D. : biochemistry.                                   | 25            |
| A. M. McCallum, M.R.C.V.S. : pathology.                                    | 16            |
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# GREAT BRITAIN

|  | Subject |
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| J. D. Paterson, M.R.C.V.S.                                 | 22      |
| J. C. Buxton, M.R.C.V.S.                                   | 22      |
| W. H. Parker, B.Sc., M.R.C.V.S., N.D.A.                    | 22      |
| D. L. Stewart, M.R.C.V.S.                                  | 22      |
| H. I. Field, M.R.C.V.S.                                    | 22      |
| G. B. S. Heath, B.Sc., M.R.C.V.S.                          | 22      |
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| (including Sterility Advisory Officers)                    | 22      |
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| D. M. Thomson, M.R.C.V.S.                                  | 22      |
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## Poultry Laboratory

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| R. H. Duff, M.R.C.V.S., <i>Research Officer</i> .  | 22 |
| R. O. Muir, B.Sc., M.R.C.V.S., <i>Research Officer</i> .                                 | 22 |

## Foot-and-Mouth Disease Research Committee

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|  | Subject |
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| W. M. Henderson, D.Sc., M.R.C.V.S., <i>Principal Scientific Officer.</i>   | 22      |
| J. B. Brooksby, Ph.D., M.R.C.V.S., <i>Principal Scientific Officer.</i>  | 22      |
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### Plant Pathology Laboratory

Milton Road, Harpenden, Herts.

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| W. C. Moore, M.A., <i>Deputy Director.</i>                       | 6  |
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| J. T. Martin, D.Sc., Ph.D., F.R.I.C., <i>Chemist.</i>            | 25 |
| I. W. Prentice, B.Sc., Ph.D., <i>Plant Pathologist.</i>          | 6  |
| F. Joan Moore, B.Sc., Ph.D., <i>Assistant in Plant Pathology</i> | 6  |
| E. Dunn, B.Sc., <i>Assistant in Entomology.</i>                  | 19 |
| J. A. Tomlinson, B.Sc., <i>Assistant in Plant Pathology.</i>     | 6  |

### Royal Botanic Gardens

Kew, Surrey.

|   |             |
|---|-------------|
| Sir Edward J. Salisbury, C.B.E., D.Sc., Sec.R.S., <i>Director.</i>  | 3, 7, 8, 12 |
| <i>Botanical Adviser to the Secretary of State for the Colonies :</i><br>organization of botanical research.                      |             |
| N. L. Bor, C.I.E., M.A., Sc.D., F.L.S., <i>Assistant Director :</i> Indian<br>grasses, tropical forestry and ecology.             | 3, 8, 10    |
| Sir Geoffrey Evans, C.I.E., M.A., <i>Economic Botanist :</i> tropical<br>and sub-tropical crops.                                  | 3           |
| W. B. Turrill, D.Sc., F.L.S., <i>Keeper, Herbarium and Library :</i><br>organisation of taxonomic and phytogeographical research. | 3, 4        |
| Miss E. M. Wakefield, M.A., F.L.S., <i>Deputy Keeper, Herbarium<br/>and Library :</i> general and systematic mycology.            | 20          |
| V. S. Summerhayes, B.Sc., <i>Botanist :</i> flora of Australia ; orchids.   | 3           |
| F. Ballard, B.Sc., <i>Botanist :</i> ferns and fern allies.   | 3           |
| N. Y. Sandwith, M.A., F.L.S., <i>Botanist :</i> flora of America.   | 3           |
| C. E. Hubbard, F.L.S., <i>Botanist :</i> grasses and grasslands.  | 3, 8        |
| E. W. B. H. Milne-Redhead, M.A., F.L.S., <i>Botanist :</i> flora of<br>Africa.  | 3           |
| H. K. Airy-Shaw, B.A., F.L.S., <i>Botanist :</i> flora of Malaya.   | 3           |
| A. A. Bullock, B.Sc., F.L.S., <i>Botanist :</i> flora of South Africa.  | 3           |
| R. W. G. Dennis, B.Sc., Ph.D., <i>Botanist :</i> mycology.  | 20          |
| B. L. Burtt, B.Sc., F.L.S., <i>Botanist :</i> flora of Europe and Nearer<br>East.   | 3           |
| J. R. Sealy, B.Sc., F.L.S., <i>Botanist :</i> flora of temperate E. Asia.   | 3           |
| J. P. M. Brenan, M.A., <i>Botanist :</i> flora of Africa.   | 3           |
| R. D. Meikle, B.A., LL.B., <i>Botanist :</i> flora of Africa.   | 3           |
| Miss P. Kies, M.Sc., <i>Botanist for South Africa.</i>  | 3           |
| F. N. Howes, D.Sc., <i>Keeper, Museums :</i> economic botany.   | 3           |

# GREAT BRITAIN

|   |              |
|---|--------------|
| R. Melville, B.Sc., Ph.D., F.L.S., <i>Botanist</i> : economic botany.                                     | Subject<br>3 |
| C. R. Metcalfe, M.A., Ph.D., F.L.S., <i>Keeper, Jodrell Laboratory</i> :<br>plant anatomy and physiology. | 3, 6         |
| W. M. Campbell, <i>Curator</i> .  | 9            |

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N.W.1.

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| Prof. R. Rae, B.Agr., <i>Director</i> .  | 1         |
| J. A. McMillan, O.B.E., B.Sc. : husbandry.   | 7, 8      |
| J. A. Rudderham, B.Sc. : husbandry ( <i>Deputy</i> ).                                    | 7, 8      |
| W. Morley Davies, M.A., B.Sc., F.R.I.C. : sciences.                                      | 2, 19, 20 |
| C. A. Scarlett, B.Sc., F.R.I.C. : sciences ( <i>Assistant</i> ).                         | 17        |
| A. J. L. Lawrence, M.A., A.R.I.C. : sciences ( <i>Assistant</i> )                        | 24, 25    |
| C. E. Hudson, N.D.H. : horticulture.   | 9         |
| A. P. Winsor, B.Sc., A.R.C.S. : horticulture ( <i>Assistant</i> )                        | 9         |
| Miss M. Mason, B.Sc.   | 9         |
| H. Twinch, O.B.E. : livestock husbandry.   | 18        |
| H. L. Shrimpton, M.C. : livestock husbandry ( <i>Deputy</i> ).                           | 18        |
| R. O. Smith : livestock husbandry ( <i>Assistant Deputy</i> ).                           | 18        |
| R. Coles, M.Sc., B.A., Ph.D. : poultry.  | 18        |
| G. W. Spencer : poultry ( <i>Assistant</i> ).  | 18        |
| W. M. O. Allcroft, B.Sc., Ph.D. : poultry ( <i>Assistant</i> ).                          | 18        |
| G. T. Morgan, N.D.A., N.D.D. : milk production.  | 17        |
| K. H. Bond, M.C., N.D.D. : milk production ( <i>Deputy</i> ).                            | 17        |
| C. Culpin, M.A. : farm machinery.  | 28        |
| H. J. Hine, B.Sc. : farm machinery.  | 28        |
| A. H. Hoare : advisory aids (horticulture)   | 9         |
| G. E. Goodman, M.B.E. : advisory aids (agriculture).                                     | 18        |

## NORTHERN PROVINCE

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| <i>Headquarters</i> : Elswick Hall, Elswick Park, Newcastle on Tyne 4.       |                               |
| C. H. Westwater, M.A., B.Sc. (Agr.), N.D.A., N.D.D., <i>Bacteriologist</i> . | 17, 22                        |
| Miss L. M. Williams, B.Sc., <i>Bacteriologist</i> .                          | 17                            |
| A. Blenkinsop, B.Sc. (Agr.).   | } <i>Soil Chemists</i> .      |
| F. W. Handley, B.Sc., Ph.D.  |                               |
| A. H. Sim, B.Sc., A.R.I.C.   | } <i>Nutrition Chemists</i> . |
| N. Trinder, M.Sc., A.R.I.C.  |                               |
| L. R. Flynn, A.R.I.C., <i>Analyst</i> .                                      | 25                            |
| M. Cohen, M.Sc., Ph.D.   | } <i>Entomologists</i> .      |
| K. J. Coghill, B.Sc.   |                               |
| W. H. Golightly, B.Sc., Ph.D.  |                               |
| J. P. Rogerson, M.Sc.  | } <i>Plant Pathologists</i> . |
| J. H. Western, B.Sc., Ph.D.  |                               |
| D. C. Gwynne, B.Sc.  | 6                             |
| C. D. Price, M.Sc. : crop husbandry.   | 7                             |
| S. Campbell, B.Agr. : crop husbandry (grassland)                             | 7                             |



|                                       |                        |    |
|---------------------------------------|------------------------|----|
| H. Mead : crop husbandry (grassland). | Subject                | 8  |
| R. J. Richards                        | } livestock husbandry. | 18 |
| J. Baker, N.D.A.                      |                        |    |
| J. Boag : milk production.            |                        | 17 |
| J. B. Morrison, N.D.P. : poultry.     |                        | 18 |
| J. Rhodes, N.D.H. : horticulture.     |                        | 9  |

## YORKS AND LANCs. PROVINCE

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| <i>Deputy Director</i> : W. Weir, M.C., M.A., B.Sc.                       |                               | 1      |
| <i>Headquarters</i> : Quarry Dene, Weetwood Lane, Leeds, 6. Yorks.        |                               |        |
| W. A. Cuthbert, M.Sc.   | } <i>Bacteriologists</i>      | 17, 22 |
| Miss L. H. Aynsley, B.Sc.   |                               |        |
| R. G. Druce, B.Sc.  |                               |        |
| H. T. Jones, M.Sc., F.R.I.C., A.R.I.C.                                    | } <i>Soil Chemists.</i>       | 2      |
| J. Webber, B.Sc.  |                               |        |
| R. R. Charlesworth, B.Sc.   |                               |        |
| C. P. May, M.A.   |                               |        |
| S. M. Bodén, B.Sc.  | } <i>Nutrition Chemists.</i>  | 15, 25 |
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| C. F. Ibbotson, B.Sc.   |                               |        |
| H. W. Thompson, M.Sc.   | } <i>Entomologists.</i>       | 19     |
| J. D. Thomas, B.Sc.   |                               |        |
| Mrs. K. L. Cottrell, B.Sc.  |                               |        |
| J. H. Fidler, M.A., Ph.D.   |                               |        |
| S. P. Simmonds, B.Sc.   |                               |        |
| A. Beaumont, M.A.   | } <i>Plant Pathologists.</i>  | 6      |
| A. R. Cottrell, B.Sc.   |                               |        |
| I. F. Storey, B.Sc., Ph.D., D.I.C.  |                               |        |
| W. W. Gatenby, M.Sc., N.D.A., N.D.D., crop husbandry.                     |                               | 7      |
| G. M. Davies, D.F.C., B.Sc.   | } crop husbandry (grassland). | 8      |
| R. P. Davies, M.Sc., N.D.A.   |                               |        |
| J. E. Lewis.  |                               |        |
| K. N. Findlay, M.B.E.   | } livestock husbandry.        | 18     |
| H. R. Kirby, N.D.A.   |                               |        |
| E. W. G. Terrey, A.M.I.M.E., A.M.I.A.S. : farm machinery.                 |                               | 28     |
| C. J. Everett, N.D.D. : milk production.                                  |                               | 17     |
| W. F. Wood, B.Sc.   | } poultry.                    | 18     |
| C. W. Goode, N.D.A., N.D.D.   |                               |        |
| W. G. Fry, N.D.H.   | } horticulture                | 9      |
| W. Bell, M.Sc., A.R.I.C.  |                               |        |
| J. H. Clift, B.Sc. : advisory aids.                                       |                               |        |

## EAST MIDLAND PROVINCE

|   |                         |    |
|---|-------------------------|----|
| <i>Provincial Director</i> : Arthur Jones, M.A., B.Sc., B.Litt. |                         | 1  |
| <i>Deputy Director</i> : W. S. Gibson, B.Sc.                    |                         | 1  |
| <i>Headquarters</i> : Shardlow Hall, Shardlow, near Derby.      |                         |    |
| H. Barkworth, M.C., <i>Bacteriologist.</i>                      |                         | 17 |
| J. W. Blood, A.R.I.C.   | } <i>Soil Chemists.</i> | 2  |
| T. G. Heafield, M.Sc., A.R.I.C.                                 |                         |    |

# GREAT BRITAIN

|  | Subject |
|--|---------|
| W. Lewis, <i>Nutrition Chemist.</i>                              | 15, 25  |
| C. S. Harper, B.Sc., A.R.I.C., <i>Analyst.</i>                   | 25      |
| A. Roebuck, N.D.A. } <i>Entomologists.</i>                       | 19      |
| J. H. White, B.Sc. }   |         |
| H. H. Stirrup, M.Sc. }   |         |
| E. Lester, B.Sc. } <i>Plant Pathologists.</i>                    | 6       |
| E. R. Wallace, M.A. }  |         |
| J. P. Cleary. }  |         |
| S. S. J. Travers, M.B.E., N.D.A. }                               |         |
| H. Jackson, M.Sc. }  | 7       |
| J. B. Page, N.D.A. }   |         |
| O. G. Williams, B.Sc. } <i>crop husbandry (grassland)</i>        | 8       |
| R. M. Deakins, B.Sc. }   |         |
| R. J. Kerr, N.D.A., N.D.D. : <i>livestock husbandry.</i>         | 18      |
| W. A. Hayles : <i>farm machinery.</i>                            | 28      |
| W. W. Baum, M.B.E., F.R.S.I., F.S.I.A. : <i>milk production.</i> | 17      |
| I. W. Rhys, N.D.P. }   |         |
| Miss B. Lang, N.D.P. }   | 18      |
| J. E. Spickernell. }   |         |
| W. L. Steer. }   | 9       |
| T. Williamson, N.D.A., N.D.D. : <i>advisory aids.</i>            | 12      |

## WEST MIDLAND PROVINCE,

|  |        |
|--|--------|
| <i>Provincial Director</i> : W. B. Mercer, M.B.E., M.C., B.Sc., N.D.A.         | 1      |
| <i>Headquarters</i> : " Woodthorne," Wergs Road, Tettenhall, Nr. Wolverhampton |        |
| L. F. L. Clegg, B.Sc., Ph.D., D.I.C., <i>Bacteriologist.</i>                   | 17, 22 |
| T. W. Walker, B.Sc., Ph.D., A.R.C.S. }   |        |
| H. T. Davies, B.Sc. }  | 2      |
| G. H. A. Edwards, B.A. }   |        |
| J. Featherstone, M.Sc. }   |        |
| G. D. Rickaby, B.Sc. }   | 15, 25 |
| A. J. Cavell, M.Sc., A.R.C.S., D.I.C., F.R.I.C., <i>Analyst.</i>               | 25     |
| H. C. F. Newton, B.Sc., A.R.C.S., D.I.C. }                                     |        |
| C. A. Collingwood, B.Sc. }   | 19     |
| D. P. Webley, B.Sc. }  |        |
| M. W. Shaw, B.Sc. }  |        |
| N. C. Preston, B.Sc. }   |        |
| H. E. Croxall, B.Sc., Ph.D. }  | 6      |
| W. R. Rosser, B.Sc. }  |        |
| J. E. E. Jenkins, B.Sc. }  |        |
| D. H. Robinson, B.Sc., Ph.D., N.D.A. }   | 7      |
| D. W. Beesley, B.Sc. }   |        |
| T. W. Evans, B.Sc., Ph.D., A.R.I.C. }  | 8      |
| J. Davies, B.Sc. }   |        |
| T. C. Robinson. }  |        |
| G. E. G. Robinson. }   | 18     |
| Miss K. D. Maddever, N.D.D. : <i>milk production.</i>                          | 17     |
| F. C. Richards, B.Sc. : <i>farm machinery.</i>                                 | 28     |
| A. P. Livingstone. }   |        |
| W. J. Lintin, N.D.P. }   | 18     |



|   |                 |   |
|---|-----------------|---|
| L. F. Clift, N.D.H.                     | } horticulture. | 9 |
| T. Richardson, N.D.H.                   |                 |   |
| M. L. M. Reeves, B.Sc. : advisory aids. |                 |   |

## EASTERN PROVINCE

|  |   |        |
|--|---|--------|
| <i>Provincial Director</i> : J. H. Anderson, N.D.A.        |   | 1      |
| <i>Deputy Director</i> : G. C. Johnson.                    |   | 1      |
| <i>Headquarters</i> : Anstey Hall, Trumpington, Cambridge. |   |        |
| C. D. Oxley, M.A., N.D.A., N.D.D., <i>Bacteriologist</i> . |   | 17, 22 |
| N. H. Pizer, M.Sc., Ph.D., F.R.I.C.                        | } <i>Soil Chemists</i> .  | 2      |
| H. T. Cranfield, O.B.E., F.R.I.C.                          |   |        |
| J. Hargrave, B.Sc.   |   |        |
| T. M. Caldwell, B.Sc., B.Agr., A.R.I.C.                    | } <i>Nutrition Chemists</i> .   | 15, 25 |
| A. Eden, M.A., Ph.D., F.R.I.C., Dip. Agr. (Cantab.).       |   |        |
| G. Alderman, B.Sc.   |   |        |
| J. R. Windass, B.Sc.                                       |   |        |
| J. W. Dewis, B.Sc., A.R.I.C., <i>Analyst</i> .             |   | 25     |
| B. A. Cooper, B.Sc., A.R.C.S.                              | } <i>Entomologists</i> .  | 19     |
| H. C. Gough, B.Sc., Ph.D., D.I.C.                          |   |        |
| E. B. Brown, M.A., M.Sc.                                   |   |        |
| A. W. Colling, B.Sc.                                       | } <i>Plant Pathologists</i> .   | 6      |
| J. J. W. Williams, B.Sc., D.I.C.                           |   |        |
| W. A. R. D. Weston, M.A., Ph.D.                            |   |        |
| E. C. Large, B.Sc., A.R.I.C.                               |   |        |
| R. E. Taylor, B.Sc., Ph.D.                                 |   |        |
| Miss E. R. Schofield, B.Sc.                                |   |        |
| Miss J. V. Ives, B.Sc.                                     |   |        |
| C. V. T. Dadd, M.A., Dip. Agr. (Cantab.) : crop husbandry. |   | 7      |
| E. O. Hawkins, M.Sc., N.D.A.                               | } crop husbandry (grassland).   | 8      |
| H. R. Williams, B.Sc.                                      |   |        |
| M. Williams, M.Sc.   |   |        |
| Fernley Smith, M.C.  | } livestock husbandry.  | 18     |
| W. Longrigg, B.Sc., N.D.A., N.D.D.                         |   |        |
| W. C. Davies, D.Sc.  | } farm machinery.   | 28     |
| H. R. Smith, N.D.A.  |   |        |
| L. Y. Whittingham : milk production.                       |   | 17     |
| G. E. Reddaway   | } poultry.  | 18     |
| H. Robinson, M.C.  |   |        |
| G. C. Johnson.   | } horticulture.   | 9      |
| E. E. Skillman, B.Sc.                                      |   |        |
| B. D. A. Tucker.   |   |        |
| J. R. Owen, N.D.A.   |   |        |
| P. S. Milne, B.Sc.   | } bee-keeping (at Rothamsted Lodge, Hatching Green, Harpenden, Herts.)            | 19     |
| E. R. Poole.   |   |        |
| G. A. Ingold.  |   |        |
| Miss J. M. Livingstone, B.Sc. : advisory aids.             |   |        |
| C. Culpin, M.A.  | } <i>N.A.A.S Liaison Unit at N.I.A.E.</i> (at N.I.A.E. Wrest Park, Silsoe, Beds.) | 28     |
| F. Gardner.  |   |        |
| Miss R. Lloyd.   |   |        |

# GREAT BRITAIN

Subject

## SOUTH EASTERN PROVINCE

*Provincial Director*: Eric Rea, M.Sc., N.D.A., N.D.D., B.D.F.D.  
*Headquarters*: Chiltern Court, St. Peter's Avenue, Caversham,  
 Reading, Berks.

|   |                              |        |
|---|------------------------------|--------|
| J. McCliment, B.Sc., N.D.A., N.D.D.   | } <i>Bacteriologists</i>     | 17, 22 |
| G. Williams, B.Sc.  |                              |        |
| M. N. Nicholson, B.Sc., A.R.I.C., <i>Soil Chemist</i>                         |                              | 2      |
| C. W. R. Smith, B.Sc., A.R.I.C., Ph.D., A.R.C.S., D.I.C., <i>Soil Chemist</i> |                              | 2      |
| J. A. C. Watson, A.R.I.C., <i>Analyst</i>                                     |                              | 25     |
| W. E. H. Holson, A.R.C.S., D.I.C.   | } <i>Entomologists</i>       |        |
| J. W. Bryden, B.A.  |                              | 19     |
| D. W. Empson, B.Sc.   |                              |        |
| R. Varley, B.Sc.  |                              |        |
| W. Buddin, M.A.   | } <i>Plant Pathologists</i>  |        |
| F. T. Roberts, B.Sc., A.R.C.S.  |                              | 6      |
| R. G. Hughes, B.Sc. : crop husbandry  |                              | 7      |
| D. J. C. Jones, M.Sc.   | } crop husbandry (grassland) |        |
| W. G. Gwynne, B.Sc.   |                              | 8      |
| E. V. Cope  | } <i>Livestock husbandry</i> |        |
| R. J. Gayton, N.D.A., N.D.D.  |                              | 18     |
| C. F. Elms, B.Sc., N.D.A. : farm machinery                                    |                              | 28     |
| S. Swift, M.B.E., F.R.S.I., F.S.I.A. : milk production                        |                              | 17     |
| F. H. Guernsey  | } <i>Poultry</i>             |        |
| H. M. Jelley  |                              | 18     |
| C. H. Oldham, N.D.H. : horticulture   |                              | 9      |
| C. H. Harper, M.C., M.A. : general agriculture                                |                              | 7      |
| J. Wilkie, B.Sc., Ph.D. : advisory aids                                       |                              |        |

*SUB-CENTRE - Deputy Provincial Director*: O. G. Dorey, B.Sc.

1, 9

*Headquarters*: Olantigh Road, Wye, near Ashford, Kent.

|   |  |        |
|---|--|--------|
| G. H. Jones, B.Sc., <i>Bacteriologist</i>             |  | 17     |
| J. O. Jones, M.Sc.                                    | } <i>Soil Chemists</i>                                   |        |
| W. Dermott, M.Sc.                                     |  | 2      |
| W. O. Sharp, M.Sc.                                    | } <i>Nutrition Chemists</i>                              |        |
| T. N. S. Copeman, M.A.                                |  | 15, 25 |
| G. H. Francis, B.Sc.                                  | } <i>Entomologists</i>                                   |        |
| B. D. Moreton, B.Sc.                                  |  |        |
| S. W. H. Rolfe, B.Sc.                                 |  | 19     |
| Miss M. E. Bunn, B.Sc.                                |  |        |
| W. I. St. G. Light, B.A.                              | } <i>Plant Pathologists</i>                              |        |
| H. H. Glascock, M.Sc.                                 |  | 6      |
| A. G. Walker, B.Sc., Ph.D.                            | } crop husbandry   |        |
| J. N. Sharrock, N.D.A., N.D.D.                        |  | 7      |
| H. G. Chippendale, M.Sc. : crop husbandry (grassland) |  | 8      |
| W. G. Kent, N.D.H.                                    | } <i>Horticulture</i> (at East Malling Research Station) |        |
| A. D. Harrison, N.D.H.                                |  | 9      |
| W. N. Evans   |  |        |
| J. C. Todd, B.Sc.                                     |  |        |



|                        |                         |   |
|------------------------|-------------------------|---|
| A. H. Burgess, B.Sc.   | } <i>Hops Advisers.</i> | 9 |
| G. P. Chater.          |                         |   |
| Miss C. L. Jary, B.Sc. |                         |   |

## SOUTH WESTERN PROVINCE

|  |                               |        |
|--|-------------------------------|--------|
| <i>Provincial Director</i> : Colin D. Ross, O.B.E., B.Sc.                    |                               | 1      |
| <i>Headquarters</i> : Crete Hill, Westbury-on-Trym, Bristol.                 |                               |        |
| J. W. Egdell, B.Sc., N.D.A., N.D.D.  | } <i>Bacteriologists.</i>     | 17, 22 |
| Miss E. R. Bird, B.Sc.   |                               |        |
| J. B. E. Patterson, M.Sc., F.R.I.C.  | } <i>Soil Chemists.</i>       | 2      |
| R. D. Russell, B.Sc., A.R.I.C.   |                               |        |
| E. L. Smith, B.Sc., A.R.I.C.   | } <i>Nutrition Chemists.</i>  | 15, 25 |
| Miss P. E. Farmer, B.Sc.   |                               |        |
| P. G. Ballinger, <i>Analyst.</i>   |                               | 25     |
| L. N. Staniland, A.R.C.S., D.I.C.  | } <i>Entomologists.</i>       | 19     |
| A. Ibbotson, B.Sc., D.I.C.   |                               |        |
| L. E. W. Stone, B.Sc., A.R.C.S.  |                               |        |
| J. F. Southey.   |                               |        |
| L. Ogilvie, M.A., M.Sc.  | } <i>Plant Pathologists.</i>  | 6      |
| A. G. Robertson, B.Sc.   |                               |        |
| Miss V. M. Wehrle, B.Sc.   | } crop husbandry.             | 7      |
| W. Q. Connold, B.Sc.   |                               |        |
| A. H. R. Lilly, N.D.A.   | } crop husbandry (grassland). | 8      |
| W. E. Jones, B.Sc.   |                               |        |
| T. H. Davies, B.Sc.  |                               |        |
| M. Roberts, B.Sc.  |                               |        |
| T. F. Blood, M.A.  |                               |        |
| Austin Jenkins.  | } livestock husbandry.        | 18     |
| H. W. Tomlinson, N.D.A., N.D.D.  |                               |        |
| H. T. Horsman, M.B.E., B.Sc., N.D.A.   | } farm machinery.             | 28     |
| C. H. Hoddell.   |                               |        |
| L. T. Weston.  |                               |        |
| S. Gibson, B.Sc., N.D.A., N.D.D. : milk production.                          |                               | 17     |
| G. E. Burkitt, N.D.P. : poultry.   |                               | 18     |
| F. A. Roach, B.Sc.   | } horticulture.               | 9      |
| Mrs. M. M. B. Tuke, B.Sc.  |                               |        |
| W. C. Turpitt, M.B.E., M.A. : advisory aids.                                 |                               |        |
| SUB-CENTRE : <i>Deputy Director</i> : L. D. C. McLees, B.Sc., N.D.A., N.D.D. |                               |        |
| <i>Headquarters</i> : Staplake Mount, Starcross, Devon.                      |                               |        |
| C. S. Morris, N.D.A.   | } <i>Bacteriologists.</i>     | 17, 22 |
| Miss M. Gregory, B.Sc.   |                               |        |
| J. Langmead, <i>Soil Chemist.</i>  |                               | 2      |
| E. G. Stopher, B.Sc., Ph.D., <i>Nutrition Chemist.</i>                       |                               | 15, 25 |
| R. E. Collier, B.Sc., A.R.I.C., <i>Analyst.</i>                              |                               | 25     |
| D. C. Thomas, B.Sc., A.R.C.S.  | } <i>Entomologists.</i>       | 19     |
| H. G. Morgan, M.A.   |                               |        |
| H. C. Woodville, B.Sc., A.R.C.S.   |                               |        |
| G. H. Brenchley, B.A.  | } <i>Plant Pathologists.</i>  | 6      |
| W. Campbell, B.Sc.   |                               |        |

# GREAT BRITAIN

|  | Subject |
|--|---------|
| E. A. Farey : livestock husbandry.                   | 18      |
| M. W. Stock : milk production.                       | 17      |
| G. E. Furse, N.D.A. : crop husbandry.                | 7       |
| R. Garrett-Jones, B.Sc. : crop husbandry (grassland) | 8       |
| H. W. Abbiss, M.B.E., N.D.H. : horticulture.         | 9       |
| A. G. Warren, N.D.P. : poultry.                      | 18      |

## WALES

|  |        |
|--|--------|
| <i>Director</i> : D. Walters Davies, B.Sc.                 | 1      |
| <i>Headquarters</i> : Trawscoed, Aberystwyth.              |        |
| S. B. Thomas, B.Sc., <i>Bacteriologist</i> .               | 17, 22 |
| R. Williams, D.Sc., <i>Soil Chemist</i> .                  | 2      |
| J. R. Lloyd, B.Sc. } <i>Nutrition Chemists</i> .           | 15, 25 |
| G. Thomas, B.Sc. }   |        |
| S. Andrus, A.R.I.C., <i>Analyst</i> .                      | 25     |
| J. R. W. Jenkins, M.Sc. }                                  |        |
| J. M. Jones, B.Sc. } <i>Entomologists</i> .                | 19     |
| T. G. Davies, M.Sc. }                                      |        |
| D. L. G. Davies, B.Sc., Ph.D. : <i>Plant Pathologist</i> . | 6      |
| A. J. Davies, B.Sc. : crop husbandry.                      | 7      |
| M. T. Thomas, B.Sc. }                                      |        |
| H. C. Bowen, B.Sc. } crop husbandry (grassland)            | 8      |
| T. Gee, }  |        |
| W. P. Dodgson } livestock husbandry.                       | 18     |
| W. S. Shattock, N.D.A. : farm machinery.                   | 28     |
| T. Idwal Jones, N.D.A., N.D.D. }                           |        |
| Miss Mena Jones, N.D.D. } milk production.                 | 17     |
| W. Evans, N.D.P. }   |        |
| R. F. Hall, N.D.P. } poultry.                              | 18     |
| S. Jackson, N.D.P. }                                       |        |
| W. C. Ibbett, N.D.H. : horticulture.                       | 9      |
| W. A. Jones, N.D.A., N.D.D. : advisory aids.               | 12     |

|   |        |
|---|--------|
| SUB-CENTRE : <i>Deputy Director</i> : E. Ll. Harry, O.B.E., M.Sc. | 1      |
| <i>Headquarters</i> : Bryn Adda, Penrhos Road, Bangor.            |        |
| Miss A. A. Nicholls, B.Sc., Ph.D., N.D.D. }                       |        |
| Mrs. P. M. Hobson. } <i>Bacteriologists</i> .                     | 17, 22 |
| E. Roberts, M.Sc., <i>Soil Chemist</i> .                          | 2      |
| J. R. Griffiths, M.Sc., <i>Nutrition Chemist</i> .                | 15, 25 |
| F. H. Jacob, M.Sc., <i>Entomologist</i> .                         | 19     |
| T. Whitehead, M.Sc., Ph.D., A.R.C.S. }                            |        |
| T. D. Holmes, B.Sc. } <i>Plant Pathologists</i> .                 | 6      |
| S. C. Melville, B.Sc. }   |        |
| D. E. Edwards, M.Sc. : crop husbandry (grassland)                 | 8      |
| W. H. Broadbent, A.R.C.S., D.I.C. : horticulture.                 | 9      |

|   |   |
|---|---|
| SUB-CENTRE : <i>Deputy Director</i> : W. Williams, M.Sc.                          |   |
| <i>Headquarters</i> : University College of South Wales and Monmouth,<br>Cardiff. | 1 |
| J. E. Watkin, B.Sc., Ph.D., <i>Soil Chemist</i> .                                 | 2 |



|  | Subject                    |
|--|----------------------------|
| I. H. H. Yarrow, M.A., Ph.D., D.I.C.,<br>W. J. Bevan, M.Sc.<br>Miss S. Lewis, B.Sc.            | } <i>Entomologists.</i> 19 |
| J. Rees, B.A., M.Sc.<br>J. B. Jones, B.Sc., Ph.D.  |                            |
| J. M. Willcock, N.D.A., N.D.D. : crop husbandry (grassland).<br>W. H. Lawrence : horticulture. |                            |
|  | 6                          |
|  | 8                          |
|  | 9                          |

## BOARD OF TRADE

## H.M. Norfolk Flax Establishment

|  |    |
|--|----|
| Flitcham Abbey, King's Lynn, Norfolk, England.                                   |    |
| G. O. Searle, O.B.E., B.Sc., A.R.I.C.S., <i>Superintendent.</i>                  | 1  |
| Miss A. G. Davin, Ph.D., <i>Principal Scientific Officer</i> : flax breeding.    | 4  |
| R. E. J. Goodman, B.Sc., <i>Scientific Officer</i> : flax diseases.              | 20 |
| R. L. Freeman-Taylor, B.A., <i>Agricultural Officer</i> : flax crops.            | 7  |
| Miss M. L. Chalk, B.Sc., <i>Assistant Experimental Officer</i> : flax diseases.  | 6  |
| Miss P. M. Latter, B.Sc., <i>Assistant Experimental Officer</i> : flax diseases. | 6  |
| G. J. Knight, <i>Senior Experimental Officer</i> : flax harvesting machinery.    | 28 |

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH  
FOOD INVESTIGATION

## Directorate of Food Investigation

|  |        |
|--|--------|
| 20a, Regent Street, Cambridge.                 |        |
| F. Kidd, M.A., D.Sc., F.R.S., <i>Director.</i> | 3, 30  |
| P. R. P. Claridge, M.A.                        | 25, 30 |
| C. West, O.B.E., M.A., D.Sc.                   | 3, 30  |

## Low Temperature Research Station

(in conjunction with the University of Cambridge).

|  |        |
|--|--------|
| E. C. Bate-Smith, M.Sc., Ph.D., <i>Superintendent.</i> | 13, 30 |
| J. Barker, M.A., Ph.D.                                 | 5, 30  |
| R. J. Bendall, B.A.                                    | 13, 30 |
| J. Brooks, B.Sc., Ph.D.                                | 17, 30 |
| J. M. Bryan, B.Sc., Ph.D.                              | 30     |
| W. G. Burton, B.Sc.                                    | 5, 30  |
| E. H. Callow, B.Sc., Ph.D., F.R.I.C.                   | 13, 30 |
| B. P. Eddy, B.Sc.                                      | 5, 30  |
| A. J. Ede, B.Sc., A.Inst.P.                            | 28, 30 |
| R. Gane, M.Sc., Ph.D., A.R.I.C.                        | 28, 30 |
| R. S. Hannan, B.A.                                     | 25, 30 |
| J. R. Hawthorne, M.Sc., Ph.D., A.R.I.C.                | 17, 30 |
| M. Ingram, M.A., Ph.D.                                 | 22, 30 |
| F. A. Isherwood, B.Sc., Ph.D.                          | 24, 30 |
| C. H. Lea, B.Sc., Ph.D., F.R.I.C.                      | 24, 30 |

## GREAT BRITAIN

|   | Subject |
|---|---------|
| L. W. Mapson, B.A., Ph.D.               | 25, 30  |
| T. N. Morris, M.A., Agr. Dip.           | 25, 30  |
| S. M. Partridge, B.Sc., Ph.D., F.R.I.C. | 25, 30  |
| J. G. Sharp, M.A., B.Sc., Ph.D.         | 13, 30  |
| T. Swain, B.Sc., A.R.I.C.               | 24, 30  |
| H. G. Wager, B.Sc., M.A., B.A., Ph.D.   | 5, 30   |

### Ditton Laboratory

East Malling, Kent.

|   |        |
|---|--------|
| R. E. Tomkins, M.A., Ph.D., <i>Superintendent</i> . | 20, 30 |
| J. C. Fidler, B.Sc., Ph.D.                          | 3, 30  |
| A. C. Hulme, M.Sc., Ph.D., A.R.I.C.                 | 25, 30 |
| W. H. Smith, B.A., Dip. Hort.                       | 9, 30  |

### \*Covent Garden Laboratory

9/13 Kean Street, London, W.C.2.

|                            |       |
|----------------------------|-------|
| J. C. Fidler, B.Sc., Ph.D. | 3, 30 |
|----------------------------|-------|

### †Smithfield Laboraroty

91, Charterhouse Street, E.C.1.

|                                       |        |
|---------------------------------------|--------|
| E. H. Callow, B.Sc., Ph.D., F. R.I.C. | 13, 30 |
|---------------------------------------|--------|

### Forest Products Research Laboratory.

Princes Risborough, Aylesbury, Bucks.

|  |  |
|--|--|
| F. Y. Henderson, D.Sc., D.I.C., <i>Director</i> .                    | 1, 11                                      |
| S. T. C. Stillwell, O.B.E., B.Sc., <i>Assistant Director</i> .       | 1, 11                                      |
| J. Bryan, M.Eng., A.M.Inst.C.E. : co-ordination—engineering sections | 11, 28                                     |
| C. W. Scott, O.B.E., D.F.C., B.Sc. : external relations.             | 11   |
| P. Harris, B.Sc., A.M.I.Mech.E.                                      | } woodworking studies                      |
| F. H. Armstrong, M.Sc., A.M.I.Mech.E.                                |  |
| R. A. G. Knight, B.Sc. (Eng.), M.I.Mech.E.                           | } laminated wood products                  |
| P. M. C. Lacey, B.Sc., D.I.C.  |  |
| J. F. S. Carruthers, B.Sc.   |  |
| R. H. J. Newall.   |  |
| L. S. Doman.   | } structure and identification of timbers. |
| B. J. Rendle, B.Sc., A.R.C.S.  |  |
| E. W. J. Phillips, B.Sc., Ph.D., A.R.C.S.                            |  |
| J. D. Brazier, B.Sc.   | } timber physics.                          |
| W. W. Barkas, D.Sc.  |  |
| R. F. S. Hearmon, A.Inst.P.  | } chemistry of wood                        |
| W. G. Campbell, B.Sc., M.Sc., A.I.C.                                 |  |
| R. H. Farmer, D.Sc., F.R.I.C.  | } investigation of fungi attacking timber. |
| K. St. G. Cartwright, M.A., D.I.C.                                   |  |
| W. P. K. Findlay, D.Sc., A.R.C.S.                                    |  |
| J. G. Savory, B.Sc.  |  |

\* This Laboratory is a sub-station of the Ditton Laboratory.

† This Laboratory is a sub-station of the Low Temperature Research Station, Cambridge.



|                                     |  | Subject |
|-------------------------------------|--|---------|
| R. C. Fisher, B.Sc., Ph.D.          | } investigation of insects attacking             | 11, 19  |
| J. D. Bletchly, B.A., B.Sc.         |  |         |
| W. C. Stevens, M.A., A.M.I.Mech.E.  | } timber seasoning and                           | 11, 28  |
| D. D. Johnston.                     |  |         |
| R. E. Hodge.                        |  |         |
| N. Turner.                          |  |         |
| J. Latham, B.S.                     | } problems relating to the mechanical properties | 11, 28  |
| A. J. Foord.                        |  |         |
| N. A. Richardson, B.Sc., A.I.C.     | } Preservation (including fire-                  | 11, 28  |
| D. N. R. Smith.                     |  |         |
| C. J. N. McCracken, B.A., Dip. For. | : publications and records.                      |         |

### Pest Infestation Laboratory

London Road, Slough, Bucks. (Slough 21295.)  
(*Insect pests of stored products*)

|  |                    |        |
|--|--------------------|--------|
| G. V. B. Herford, O.B.E., M.Sc., <i>Director</i> . |                    | 19     |
| E. A. Parkin, Ph.D., M.Sc., D.I.C.                 | } insecticides.    | 19     |
| P. S. Hewlett, B.Sc.                               |                    | 19     |
| J. A. Hope, B.Sc.                                  |                    | 19     |
| Miss P. Ford, B.Sc.                                |                    | 19     |
| A. A. Green (Blowflies).                           |                    | 19     |
| T. A. Oxley, B.Sc., A.R.C.S.                       | } biology.         | 3, 19  |
| Miss M. B. Hyde, M.Sc.                             |                    | 3      |
| M. E. Solomon, M.Sc. (Mites.)                      |                    | 19     |
| R. W. Howe, B.Sc., A.R.C.S.                        |                    | 19     |
| Miss S. G. Rawle, B.Sc. (Clothes moths)            |                    | 19     |
| A. M. Cunnington.                                  |                    | 19     |
| W. Burns Brown, M.Sc., F.R.I.C., A.R.C.S., D.I.C.  |                    | 24     |
| S. E. Lewis, A.R.I.C.                              | } fumigants.       | 24, 25 |
| H. K. Heseltine, B.Sc.                             |                    | 24     |
| F. P. W. Winteringham, A.R.I.C.                    | } radio chemistry. | 24     |
| A. Harrison.                                       |                    | 24     |

### FORESTRY COMMISSION

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25, Savile Row, London, W.1.

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| J. Macdonald, <i>Director of Research and Education</i> . | 1, 10 |
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#### Forest Research Station

Alice Holt, Wrocclesham, Farnham, Surrey. Tel : Bentley 2153.

|   |           |
|---|-----------|
| M. V. Laurie, O.B.E., M.A., <i>Chief Research Officer</i> . | 1, 10     |
| R. F. Wood, B.Sc. : silviculture.                           | 10        |
| M. Nimmo : silviculture.                                    | 10        |
| G. D. Holmes, B.Sc. : silviculture.                         | 3, 10     |
| P. C. Gough : silviculture.                                 | 10        |
| R. D. Pinchin, B.Sc. : silviculture.                        | 10        |
| A. A. Zukowski, B.A. : silviculture.                        | 10        |
| T. R. Peace, B.A. : forest pathology and mycology.          | 6, 10, 20 |
| J. M. B. Brown, B.Sc. : forest ecology.                     | 3, 10     |
| F. C. Hummel, B.A. : mensuration and statistics.            | 10, 29    |

## GREAT BRITAIN

|  | Subject |
|--|---------|
| H. S. Hanson, M.Sc. : forest entomology.         | 19      |
| J. D. Matthews, B.Sc. : forest genetics.         | 4, 10   |
| J. S. R. Chard, B.Sc. : census of woodlands.     | 10      |
| J. L. F. Fergusson, B.Sc. : census of woodlands. | 10      |

### 35, Manor Place, Edinburgh

Tel : Edinburgh 30275.

|  |    |
|--|----|
| J. A. B. MacDonald, : silviculture.      | 10 |
| I. Leadbeater, B.Sc. : silviculture.     | 10 |
| A. M. Mackenzie : mensuration            | 10 |
| J. W. L. Zehetmayr, B.A. : silviculture. | 10 |
| M. V. Edwards, B.A. : silviculture.      | 10 |

## IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY

Prince Consort Road, South Kensington, London, S.W.7.

### Botany Department

|   |       |
|---|-------|
| Prof. W. Brown, M.A., D.Sc., F.R.S. : mycology ; plant pathology. | 6, 20 |
| Miss M. S. Lacey, D.Sc. : plant bacteriology.                     | 22    |
| S. E. Jacobs, D.Sc. : bacteriology.                               | 22    |
| Miss M. J. Smieton, B.Sc. : mycology.                             | 20    |
| H. W. Buston, D.Sc., A.R.C.S., D.I.C. : biochemistry.             | 25    |
| J. Russell, B.Sc. : biochemistry.                                 | 25    |
| R. K. S. Wood, B.Sc., Ph.D., A.R.C.S. : mycology.                 | 20    |
| A. J. Rutter, Ph.D., A.R.C.S. : ecology.                          | 10    |
| F. T. Last, B.Sc., A.R.C.S. : plant pathology.                    | 6     |
| Miss M. J. Thornley, B.Sc., A.R.C.S. : bacteriology.              | 22    |
| Miss M. Mayer, B.Sc., A.R.C.S. : plant pathology.                 | 6     |

### Chemistry Department

|  |         |
|--|---------|
| A. G. Pollard, A.R.C.S., B.Sc., F.R.I.C. : agricultural chemistry. | 2, 5, 9 |
| J. T. Hannen, M.A., A.R.C.S., A.R.I.C. : agricultural chemistry.   | 2, 5, 9 |
| A. H. Cornfield, Ph.D., A.R.C.S. : agricultural chemistry.         | 2, 5, 9 |

### Zoology Department

|   |        |
|---|--------|
| Prof. J. W. Munro, M.A., D.Sc. : applied entomology   | 1, 19  |
| A. B. P. Page, Ph.D., A.R.C.S., <i>Reader in Applied Entomology</i> : insecticides.                               | 19, 24 |
| O. F. Lubatti, D.Chem., M.Sc., <i>Lecturer in Chemistry of Insecticides</i> with special reference to fumigation. | 19, 24 |
| W. F. Jepson, O.B.E., Ph.D., A.R.C.S. : applied entomology with special reference to tropical problems.           | 19     |
| D. R. P. Murray, M.A., Ph.D. : chemical aspects of insect physiology.   | 25     |
| A. E. H. Higgins, A.R.C.S., D.I.C. : insecticides and appliances.   | 19     |
| B. S. Gorringe, B.Sc., A.R.C.S. : insecticides with special reference to mercury and mercury compounds.           | 24     |
| R. H. Blackith, B.Sc. : insecticides with special reference to pyrethrum.   | 24     |

|  |               |
|--|---------------|
| O. W. Richards, M.A., D.Sc., <i>Reader in Entomology</i> : research on insect populations. | Subject<br>19 |
| Miss N. Waloff, Ph.D. : research in insect ecology and insect population.                  | 19            |
| Miss B. Jacobs, B.Sc. : protozoology.  | 23            |

### Research Institute of Plant Physiology

|  |       |
|--|-------|
| Prof. F. G. Gregory, D.Sc., F.R.S., <i>Director</i> .                    | 1     |
| O. V. S. Heath, D.Sc., : stomatal problems.                              | 3     |
| F. J. Richards, B.Sc. : chromatography in relation to mineral nutrition. | 3     |
| *B. D. Bolas, D.Sc. : manganese deficiency.                              | 3     |
| Mrs. H. K. Porter, D.Sc. : phosphorylase mechanism in barley.            | 5, 25 |
| Miss O. N. Purvis, Ph.D. : vernalisation of cereals.                     | 3     |
| *E. S. J. Hatcher, Ph.D. : hormones in propagation of fruit.             | 3     |
| *C. L. Mer, Ph.D., : hormone problems.                                   | 3     |
| *H. W. B. Barlow, B.Sc. : fruit bud development.                         | 3     |
| W. W. Schwabe, B.Sc., A.R.C.S. : photoperiodism of chrysanthemum.        | 3     |
| *F. W. M. Llewelyn, B.Sc., A.R.C.S. : oil spray damage.                  | 3     |
| *C. R. Hancock, B.Sc. : hormones in propagation of fruit.                | 3     |

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### Department of Parasitology

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| Prof. H. E. Shortt, M.D., D.Sc., D.T.M. and H., <i>Professor of Medical Protozoology</i> : medical and comparative protozoology. | 23 |
| Prof. J. J. C. Buckley, D.Sc., <i>Professor of Helminthology</i> : medical comparative helminthology.                            | 21 |
| P. L. Leroux, D.Sc., M.R.C.V.S., <i>Lecturer in Helminthology</i> .  | 21 |

## WYE COLLEGE

### Department of Agriculture

|  |           |
|--|-----------|
| M. Mc. G. Cooper, B.Agr. Sc. (N.Z.), B.Litt. (Oxon.), Dip. Rural Econ. (Oxon.), <i>Prof. of Agric., University of London</i> : animal husbandry, breeding and selection of farm livestock ; utilization of grassland and forage crops. | 8, 14, 17 |
| A. C. Owers, B.A. (Cantab.), Dip. Agr. (Cantab.) : poultry progeny testing.  | 14        |
| A. G. Davis, M.Sc. (Wales), B.S.A. (Guelph.) : grassland production and utilization.   | 8         |
| A. C. Dunkin, B.Sc. (Agr.), Reading : pigs progeny testing, nutrition and management.  | 14, 17    |

### Department of Horticulture

|  |           |
|--|-----------|
| H. W. Miles, M.Sc. (Bristol), D.Sc. (Manchester), <i>Professor of Horticulture, University of London</i> : vegetable crop husbandry, entomology. | 9, 12, 19 |
|--|-----------|

\*Working at East Malling Research Station.



## GREAT BRITAIN

|   |                  |
|---|------------------|
| N. B. Bagenal, B.A. (Cantab.), Dip. Hort. (Wye) : pomology fruit tree nutrition.                            | Subject<br>9, 12 |
| A. A. Jackson, B.Sc. (Manchester) : horticulture ; glasshouse crops ; methods of intensive crop production. | 9, 12            |
| Mary Page, N.D.H., Dip. Hort. (Swanley) : horticulture ; methods of propagation ; flower crop production.   | 9, 12            |
| Mary Miles, M.Sc. (Manchester) : entomology with special reference to soil insects.                         | 19               |

### Department of Physical Sciences

|  |       |
|--|-------|
| R. L. Wain, D.Sc. (Lond.), Ph.D., M.Sc. (Sheff.), F.R.I.C. : chemistry—insecticides, plant growth—regulating substances. | 24    |
| Margaret S. Smith, B.Sc., Ph.D. (Lond.), A.R.I.C. : chemistry—insecticides.  | 24    |
| C. F. Mills, B.Sc. (Reading) : chemistry—copper status of plants.  | 5     |
| D. A. Pantony, B.Sc. (Lond.), Ph.D. (Leeds) : chemistry—plant growth-regulating substances                               | 24    |
| R. C. Seeley, B.Sc. Agri. (Lond.) : chemistry—investigations with pollen extracts.                                       | 24    |
| Daphne J. Osborne, M.Sc. (Lond.) : chemistry—plant growth-regulating substances.   | 3, 24 |

### Department of Biological Sciences

|   |    |
|---|----|
| M. D. Froud, B.Sc. (Lond.) : animal anatomy and physiology—hatching of pedigree stock eggs.   | 13 |
| R. P. Gould, B.Sc. (Lond.) : animal anatomy and physiology—studies of chick development.  | 13 |
| P. A. Holwill, B.Sc. (Lond.) : general botany—fruit bud differentiation and anatomy of apple shoots.  | 3  |
| N. L. Penston, B.A., D.Phil. (Oxon.), F.L.S. } plant physiology—<br>with Molly Sanderson, B.Sc. (Lond.) } hormones and growth<br>of seedlings                                     | 3  |
| F. C. Schimmer, B.Sc. (Lond.), A.R.C.S. : plant pathology ; carnation ring spot, and control measures.  | 6  |
| I. W. Selman, B.Sc. (Lond.), Ph.D. (Lond.) : plant physiology—<br>(i) soil conditions and fruiting and disease resistance of outdoor tomatoes ; (ii) winter hardiness in lettuce. | 3  |

### Department of Hop Research

|  |          |
|--|----------|
| A. H. Burgess, B.Sc. (Agr.), D.Sc., Dip. Agri. (Wye) : hop research—cultivation and drying of hops.                    | 1, 2, 30 |
| F. C. Thompson, M.Sc., A.R.I.C. : hop research—investigation of soils and nutrition of hops.                           | 2, 5     |
| E. G. Cripps, B.Sc. (Agr.), Dip. Agri. (Wye) : A.I.C.T.A. : hop research—investigation of soils and nutrition of hops. | 2        |
| S. O. S. Dark, B.Sc., Ph.D. : hop research—hop breeding and genetics.  | 4, 9     |
| A. R. Tatchell, B.Sc. : hop research—chemical examination of hops.   | 5        |
| D. Wickham, B.Sc. (Agr.) : hop research—field trials.  | 9        |

**Department of Economics**

|  |    |
|--|----|
| J. Wyllie, O.B.E., B.Sc. (Agr.) (Glas.), N.D.A. (Hons.), N.D.D.,<br><i>Principal Agricultural Economist</i> : farm management. | 27 |
| J. B. Butler, M.Sc. (Lond.) : fruit and market garden investigations.  | 27 |
| R. F. Lord, B.Sc. (Agr.) (Lond.) : farm management.  | 27 |
| J. H. Hooper, Dip. Agri. (Wye) : farm management.  | 27 |
| E. R. Woollard, Dip. Hortic. (Wye) : fruit and market gardening.   | 27 |
| J. M. Brewin, B.A. (Agr.) (Cantab.) : farm management and hops.  | 27 |
| D. H. Wylie, B.Sc. (Agr.) (Reading) : milk production.   | 27 |
| P. G. L. de Morpurgo, B.Sc. (Agr.) (Reading) : milk production.  | 27 |
| H. G. Halls : cost accounting.   | 27 |

**BEDFORD COLLEGE FOR WOMEN**

Regent's Park, London, N.W.1. Tel. : Welbeck 5743.

**Botany Department**

|   |          |
|---|----------|
| Prof. L. J. Audus, M.A., Ph.D. (Cantab.) : mechanism of action of the plant hormone herbicides. | 2, 3, 12 |
| Mr. P. R. Wareing, B.Sc. (Lond.) : growth problems in forest and fruit trees.                   | 3, 10    |

**Forestry Commission**

|   |       |
|---|-------|
| Dr. Ida Levisohn, Ph.D. (Lond.) : mycorrhiza and tree nutrition | 2, 10 |
|---|-------|

**CAMBRIDGE UNIVERSITY****Animal Nutrition Research Institute**

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| J. Wishart, M.A., D.Sc., Reader in Statistics, <i>Consultant</i> . | 29 |
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**NUTRITION SECTION**

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| H. E. Woodman, M.A., Ph.D., D.Sc. | 15 |
| R. E. Evans, Ph.D.                | 15 |

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| A. Walton, Ph.D.                        | 13 |
| R. W. Pomeroy, M.A.                     | 13 |

**POULTRY NUTRITION**

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| E. T. Halnan, M.A. | 15 |
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**POULTRY GENETICS**

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| D. G. Gilmour, M.A. | 14 |
| A. G. Cock, B.A.    | 14 |

**Institute of Animal Pathology**

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| Milton Road, Cambridge   |    |
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| J. A. Young, M.C., M.B., Ch.B., <i>Pathologist</i> .   | 22 |
| G. Lapage, M.A., M.D., M.Sc., <i>Parasitologist</i> .  | 21 |
| R. Scarisbrick, Ph.D., B.A., M.R.C.V.S., <i>Biochemist</i> .                                     | 15 |

**Veterinary Investigation Department**

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| H. I. Field, M.Sc., M.R.C.V.S., <i>Veterinary Investigation Officer.</i>                       | 22 |
| K. C. Sellers, B.Sc., M.R.C.V.S., D.V.S.M., <i>Assistant Veterinary Investigation Officer.</i> | 22 |

**Plant Breeding Institute**

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| H. W. Howard, Ph.D.   | 4    |
| J. L. Fyfe, M.Sc.   | 4    |
| F. G. H. Luptow, B.A.   | 4    |
| S. G. Stephens, M.A.  | 4    |
| R. N. H. Whitehouse, M.A.   | 4    |

**Horticultural Research Station**

|                              |   |
|------------------------------|---|
| D. Boyes, M.A.               | 9 |
| G. D. Sullivan, B.Sc.        | 9 |
| R. M. Woodman, Ph.D., F.I.C. | 9 |
| D. W. Wright, M.A.           | 9 |
| H. Williams, B.Sc.           | 9 |

**School of Agriculture**

|  |      |
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| Prof. Sir F. L. Engledow, C.M.G., M.A., F.R.S., <i>Drapers' Professor of Agriculture.</i>    | 1, 4 |
| A. J. Brookes, M.A. : animal husbandry   | 18   |
| S. Dickinson, M.A., M.Sc. : plant pathology  | 20   |
| E. C. Childs, Sc.D. : soil physics.  | 2    |
| F. Hanley, M.A. : crop husbandry.  | 7    |
| F. G. W. Jones, M.A. : entomology.   | 19   |
| J. Line, M.A. : botany.  | 3    |
| W. S. Mansfield, C.B.E., M.A., <i>Director of the University Farm, and Animal Husbandry.</i> | 18   |
| A. W. Menzies-Kitchin, Ph.D. : agricultural economics.                                       | 27   |
| H. H. Nicholson, M.B.E., M.A. : soil science.  | 2    |
| P. W. Arnold, M.A. : soil science.   | 2    |
| M. G. Barker, M.A. : crop husbandry.   | 7    |
| N. C. George, Ph.D. : soil physics.  | 2    |
| R. Leach, B.A. : plant pathology.  | 6    |
| W. T. Ridgman, M.A. : crop husbandry.  | 7    |
| F. G. Sturrock, B.Sc. : accountancy.   | 27   |
| J. H. S. Wilkinson, M.A. : animal husbandry.   | 18   |

**Plant Virus Research Unit (Agricultural Research Council)**

|  |    |
|--|----|
| Kenneth M. Smith, D.Sc., Ph.D., F.R.S., <i>Director.</i> | 22 |
| Roy Markham, M.A., Ph.D.                                 | 22 |
| J. D. Smith, M.A., Ph.D.                                 | 22 |
| J. H. Hitchborn, B.Sc.                                   | 22 |



## OXFORD UNIVERSITY

**Agricultural Economics Research Institute**

Parks Road, Oxford. Tel. : Oxford 2775.

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| R. N. Dixey, M.A.                                 | } <i>Research Officers.</i> |
| J. R. Raeburn, M.A., B.Sc. (Agr.),<br>M.S., Ph.D. |                             |
| K. E. Hunt, M.A.                                  |                             |
| D. K. Britton, M.A., B.Sc.                        |                             |
| G. P. Hirsch, M.A.                                |                             |
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| P. A. Manning, M.A., Ph.D.                        |                             |
| H. A. Beecham, B.A.                               |                             |
| H. A. Rhee, M.A.                                  |                             |
| J. C. Abbott, B.A.                                | 27, 29                      |

**Department of Agriculture**

Parks Road, Oxford. Tel. : Oxford 3322.

|  |             |
|--|-------------|
| G. E. Blackman, M.A., <i>Head of Department and Professor of Rural Economy</i> . | 1, 3, 5, 29 |
| E. W. Russell, Ph.D., M.A., <i>Reader in Soil Science - soil ecology</i> .       | 2           |

*University and Department Demonstrators*

|                                      |       |
|--------------------------------------|-------|
| G. D. Amery, M.A.                    | 27    |
| G. R. Clarke, M.A. : pedology.       | 2     |
| J. C. B. Ellis, M.A.                 | 15    |
| J. L. Harper, B.A.                   | 6, 20 |
| A. J. Marshall, Ph.D.                | 13    |
| R. Scott Russell, M.A., M.Sc., Ph.D. | 2, 3  |
| M. H. R. Soper, M.A.                 | 8, 18 |

*Research Assistants*

|   |         |
|---|---------|
| E. K. Woodford, Ph.D., M.A., <i>Assistant Director of Research on Phytocidal Action and Experimental Agronomy</i> . | 3, 5, 7 |
| O. N. Bishop, B.Sc.   | 3       |
| E. S. Bunting, B.Sc.  | 4, 29   |
| K. Holly, B.Sc. (Agr.) : herbicides.  | 3, 5    |
| G. W. Ivens, B.A. : herbicides.   | 3, 5    |
| R. P. Martin, M.A. : physics.   | 3       |
| H. A. Roberts, B.Sc. : herbicides.  | 3, 5    |
| E. W. Simon, M.A. : herbicides.   | 3, 25   |

**Department of Forestry, Imperial Forestry Institute**

Parks Road, Oxford. Tels : Oxford 2931, 3131.

|   |        |
|---|--------|
| H. G. Champion, C.I.E., M.A., <i>Head of Department and Professor of Forestry</i> . | 10, 11 |
| M. L. Anderson, D.Sc. : mensuration and forest practice.                            | 10     |
| N. V. Brasnett, M.A. : management.  | 10     |
| L. Chalk, M.A., D.Phil. : wood anatomy.   | 10     |

## GREAT BRITAIN

|   | Subject |
|---|---------|
| R. N. Chrystal, Hon. M.A., D.Sc., <i>Forest Entomologist</i> .              | 10, 19  |
| W. R. Day, M.A., B.Sc. : forest pathology.                                  | 6, 20   |
| G. W. Dimbleby, M.A., B.Sc. : ecology.                                      | 2, 3    |
| W. R. C. Handley, Ph.D. : microbiology.                                     | 2, 20   |
| A. C. Hoyle, M.A., B.Sc. (Department of Botany) : systematic forest botany. | 3       |
| E. W. Jones, M.A., Ph.D. : silviculture.                                    | 10      |
| L. Leyton, Ph.D. : tree physiology.   | 2, 3    |
| A. H. Lloyd, O.B.E., M.C., T.D., M.A. : forest engineering and utilisation. | 10, 11  |
| J. J. MacGregor, B.Litt., B.Sc., M.S. : forest economics.                   | 10, 27  |
| P. E. W. Murphy, B.Agr.Sci. : soil research.                                | 2       |
| P. J. Rennie, B.Sc. : soil research.  | 2       |
| F. White, B.A. : systematic forest botany.                                  | 3       |

## BRISTOL UNIVERSITY

### Agricultural and Horticultural Research Station

Long Ashton.

|  |                  |
|--|------------------|
| T. Wallace, <i>Director</i> : plant nutrition ; soils ; fruit quality and storage. | 1, 2, 5, 9<br>24 |
|--|------------------|

### CHEMISTRY

|  |             |
|--|-------------|
| H. Martin, D.Sc., A.R.C.S., F.R.I.C. : chemical methods of disease and pest control.   | 5, 6, 24    |
| C. Bould, M.Sc., Ph.D. : soils and nutrition of fruit plants.                          | 2, 5, 9     |
| D. J. D. Nicholas, B.Sc., Ph.D., A.K.C., <i>Chemist</i> : mineral nutrition of plants. | 2, 3, 5, 25 |
| J. A. H. Tolhurst, B.Sc. (Agr. Chem.), <i>Chemist</i> : soils and plant nutrition.     | 2, 5, 9     |
| W. A. Forster, B.Sc. (Chem.) : mineral nutrition of plants.                            | 2, 5, 9     |

### BIO-CHEMISTRY

|   |       |
|---|-------|
| A. Pollard, M.Sc., Ph.D. : fruit and vegetable quality ; fruit products.            | 5, 25 |
| Margaret E. Kieser, B.Sc., A.R.I.C. : fruit and vegetable quality ; fruit products. | 5, 25 |
| Audrey Stone, B.Sc. : fruit and vegetable quality ; fruit products.                 | 5, 25 |

### ORGANIC CHEMISTRY

|  |          |
|--|----------|
| D. Woodcock, M.Sc., Ph.D., A.R.I.C. : synthesis of organic insecticides and growth substances. | 5, 6, 24 |
| A. H. Williams, M.A., B.Sc. : mineral nutrition of plants.                                     | 2, 5, 25 |

### PHYSICAL CHEMISTRY

|  |       |
|--|-------|
| W. D. E. Thomas, B.Sc., Ph.D., A.R.I.C. : chemical methods of disease and pest control ; application of radioactive tracers. | 6, 24 |
|--|-------|

### ENTOMOLOGY

|   |           |
|---|-----------|
| H. G. H. Kearns, B.Sc., Ph.D., Dip.Agr. : pests of fruit and willows ; bio-assays ; spraying machinery and equipment. | 6, 19, 28 |
|---|-----------|

|  |                  |
|--|------------------|
| A. Stringer, B.Sc., A.R.C.S., <i>Entomologist</i> : insecticidal bio-assays. | Subject<br>6, 19 |
| S. H. Bennet, B.Sc. : fruit pests ; bio-assays.                              | 6, 19, 28        |
| N. G. Morgan, B.Sc. : fruit pests ; spray mechanics.                         | 6, 19, 28        |

#### MYCOLOGY

|  |       |
|--|-------|
| R. W. Marsh, M.A. : diseases of fruit.             | 6, 20 |
| S. H. Crowdy, B.Sc., A.R.C.S. : diseases of fruit. | 6, 20 |

#### PLANT PHYSIOLOGY

|  |             |
|--|-------------|
| E. J. Hewitt, B.Sc., Ph.D., A.K.C. : mineral nutrition of plants ; pot culture methods.            | 2, 3, 5, 25 |
| W. Plant, B.Sc. (Hort.), Ph.D., <i>Field Investigations Officer</i> : mineral nutrition of plants. | 2, 3, 5     |
| E. W. Jones, M.Sc., <i>Plant Physiologist</i> : mineral nutrition of plants.                       | 2, 3, 5     |

#### POMOLOGY

|  |      |
|--|------|
| G. T. Spinks, M.A., Dip. Agri. : fruit breeding ; rootstocks for hardy fruits.                   | 4, 9 |
| L. C. Luckwill, B.Sc., Ph.D. : plant hormones ; physiology of tree growth and fruit development. | 3, 9 |
| E. W. Hobbis, B.Sc., N.D.H. : practical pomology.  | 9    |

#### CIDER

|   |           |
|---|-----------|
| Emeritus Professor B. T. P. Barker, M.A. : vintage fruit (apples and pears) ; microbiology.             | 9, 22, 25 |
| S. W. Challinor, D.Sc., Ph.D., F.R.I.C. : cider and perry fermentation ; microbiology and biochemistry. | 9, 22, 25 |
| L. F. Burroughs, B.Sc. (Agr. Chem.), A.R.I.C. ; cider and perry ; biochemistry.                         | 9, 25     |

#### FRUIT AND VEGETABLE PRESERVATION

|  |            |
|--|------------|
| Miss B. A. Crang, B.Sc. : chemistry of food ; domestic preservation.             | 22, 25, 30 |
| Miss M. Sturdy, B.Sc. (H. and S.S.) : chemistry of food ; domestic preservation. | 22, 25, 30 |

#### Fruit and Vegetable Preservation Research Station

Campden, Glos. (Tel. : Campden 319).

*The activities of this Station are confined to advisory and research work on commercial canning, bottling, and quick freezing.*

|   |    |
|---|----|
| F. Hirst, M.Sc., A.R.C.Sc., <i>Director</i> .           | 30 |
| W. B. Adam, M.A., F.R.I.C. : chemistry.                 | 30 |
| T. G. Gillespy, B.Sc., Ph.D., A.R.C.Sc. : bacteriology. | 30 |
| F. Brown, M.Sc., Ph.D. : chemistry.                     | 30 |

#### LIVERPOOL UNIVERSITY

##### Department of Veterinary Pathology

|  |    |
|--|----|
| G. O. Davies, D.V.Sc., M.R.C.V.S., D.V.H., <i>Head</i> .       | 16 |
| A. R. Jennings, B.V.Sc., M.R.C.V.S., <i>Lecturer</i> .         | 16 |
| M. A. Soltys, B.V.Sc., Dr. Med. Vet., Ph.D., <i>Lecturer</i> . | 16 |
| J. Scarnell, B.V.Sc., M.R.C.V.S., <i>Assistant Lecturer</i> .  | 16 |



## READING UNIVERSITY

**National Institute for Research in Dairying**

Shinfield, near Reading. (Tel. : Reading 83103).

Prof. H. D. Kay, C.B.E., D.Sc., F.R.S., *Director* : milk secretion. 1, 13, 17, 25  
 A. T. R. Mattick, B.Sc., Ph.D., *Deputy Director*. 17, 22

## HEADS OF DEPARTMENTS

S. Bartlett, M.C., B.Sc., Ph.D., N.D.D. : feeding and metabolism ;  
 nutrition of farm stock. 15, 17  
 G. W. Scott Blair, M.A., Ph.D., D.Sc., F.R.I.C., F.Inst.P. : chem-  
 istry and physics ; rheological properties of dairy material ;  
 application of psycho-physics in dairy industry. 17, 24  
 Miss D. V. Dearden, N.D.D. : dairy ; manufacture of butter and  
 cheeses. 17  
 S. J. Folley, Ph.D., D.Sc. : lactational physiology ; biochemistry  
 and endocrinology. 13, 17  
 A. S. Foot, B.Sc. (Agr.), M.Sc. : dairy husbandry ; dairy hus-  
 bandry and dairy farm management. 14, 17  
 H. S. Hall, B.Sc. : engineering ; dairy engineering. 17, 28  
 S. K. Kon, Ph.D., D.Sc., F.R.I.C. : nutrition. 15, 17  
 A. T. R. Mattick, B.Sc., Ph.D. : bacteriology. 17, 22

## OTHER MEMBERS OF STAFF

A. R. Aschaffenburg, Ph.D. : chemistry and physics ; colloidal  
 properties of milk ; control of pasteurisation. 17, 24  
 C. C. Balch, B.Sc. : feeding and metabolism ; nutrition in relation  
 to milk yield. 15, 17  
 Miss M. Baron, B.Sc. : chemistry and physics ; rheological pro-  
 perties in cheese. 17  
 N. J. Berridge, B.Sc., Ph.D. : bacteriology ; proteins ; antibiotics. 17, 22  
 R. Braude, B.Sc. (Agr.), Ph.D. : dairy husbandry ; dairy and pig  
 husbandry. 15, 17  
 M. E. Castle, B.Sc. (Agr.), N.D.A., N.D.D. : dairy husbandry. 14, 17  
 Miss M. E. Coates, Ph.C. : nutrition ; biological assay. 15  
 A. T. Cowie, B.Sc., Ph.D., M.R.C.V.S. : lactational physiology ;  
 endocrinology of reproduction and lactation. 13, 17  
 F. H. Dodd, B.Sc. (Agr.) : dairy husbandry ; cowshed manage-  
 ment. 14, 17  
 T. H. French, B.Sc., M.R.C.V.S. : lactational physiology ; bio-  
 chemistry of reproduction and lactation. 13, 17  
 R. Harper, M.Sc. : chemistry and physics ; psycho-physical as-  
 pects of dairying. 17  
 Miss K. M. Henry, B.Sc., Ph.D., A.R.C.Sc.I., A.R.I.C. : nutrition ;  
 mineral and protein metabolism. 15, 17  
 A. Hirsch, B.Sc. (Dairying), Ph.D. : bacteriology ; antibiotics. 17, 22  
 Miss E. R. Hiscox, M.Sc., B.Sc. : bacteriology ; flora of cheese—  
 pasteurisation. 17, 22  
 Mrs. S. K. Kon, Ph.D., M.R.C.V.S. : *Honorary Research Assistant* :  
 nutrition. 15

|   | Subject    |
|---|------------|
| F. K. Neave, B.S.A. : bacteriology ; bovine mastitis.   | 17, 22     |
| J. W. G. Porter, M.A., Ph.D. : nutrition ; chemistry and metabolism of vitamins.  | 15, 17, 24 |
| S. J. Rowland, B.Sc., Ph.D., F.R.I.C., <i>Research Analyst</i> : chemistry and physics ; compositional quality of milk and milk products. | 17, 24     |
| A. Rowlands, B.Sc., M.S. : bacteriology ; bacteriology of milk production and pasteurisation.   | 17, 22     |
| Miss M. E. Sharpe, B.Sc. : bacteriology ; investigation of faecal streptococci in outbreaks of epidemic neonatal diarrhoea.               | 17, 22     |
| Miss E. E. Shephard, B.Pharm., Ph.C. : nutrition ; biological assay.  | 15         |
| Miss M. E. Taylor, B.A. : bacteriology ; intestinal flora of mammals  | 17, 22     |
| C. C. Thiel, B.Sc., Ph.D. : engineering ; dairy engineering.  | 17, 28     |
| S. Y. Thompson, B.Sc., Ph.D. : nutrition ; biochemistry of nutrition.   | 15, 17     |
| D. M. Walker, B.Sc. (Agr.), Ph.D., N.D.A. (Hons.) : feeding and metabolism ; gestation and calfhood.                                      | 15, 17     |
| F. W. Wilby, B.Sc. : nutrition ; microbiological assay.   | 15, 17     |
| D. A. Balch, B.Sc. (Agr.) : chemistry and physics ; analytical chemistry.   | 17, 24     |
| A. F. Bunker, A.M.I.E.E. : engineering ; dairy engineering.   | 17, 28     |
| H. Burton, B.Eng. : engineering ; radio frequency sterilization.  | 17, 28     |
| Miss M. Cawthorn, B.Sc. : bacteriology ; lactic streptococci.   | 17, 22     |
| C. P. Cox, M.A. : statistics.   | 29         |
| F. A. Glover, B.Sc. : chemistry and physics ; bovine secretions.  | 17, 24     |
| Miss E. Grinsted, N.D.D. : bacteriology ; antibiotics.  | 17, 22     |
| C. L. Hannay, B.Sc., D.I.C., Ph.D. : bacteriology ; serological classification of streptococci.   | 17, 22     |
| G. F. Harrison, Ph.C. : nutrition ; biological assay.   | 15         |
| J. B. Hoyle, M.A. : engineering ; dairy engineering   | 17, 28     |
| Mrs. E. C. Latham, N.D.D. : bacteriology.   | 17, 22     |
| J. M. Lee, B.A. : dairy husbandry.  | 17         |
| S. P. Legg, B.Sc. (Agr.), B.A. : feeding and metabolism.  | 15, 17     |
| Mrs. J. V. Marsden, B.Sc., N.D.D. : bacteriology.   | 17, 22     |
| K. G. Mitchell, B.Sc. (Agr.), N.D.A. : dairy husbandry.   | 17         |
| Miss D. M. Wheeler, B.Sc. : bacteriology ; antibiotics.   | 17, 22     |

## Faculty of Agriculture and Horticulture

(Tel: Reading 4422)

### AGRICULTURE

|  |        |
|--|--------|
| Prof. H. G. Sanders, M.A., Ph.D., <i>Dean of the Faculty</i> . | 12, 18 |
| D. J. G. Black, B.Sc. (Agr.).                                  | 12, 18 |
| H. F. Fieldsend, B.Sc. (Agr.).                                 | 12     |
| S. Fox, B.A.   | 12, 18 |
| J. Pearce, N.D.A., N.D.D.                                      | 18     |
| J. Getty, B.Agr.   | 12, 18 |
| J. N. Dominy, F.R.I.C.S., L.R.I.B.A.                           | 28     |
| J. W. Y. Higgs, M.A.   | 28     |
| Miss E. W. Bobr, M.Sc.   | 18, 25 |

# GREAT BRITAIN

|   | Subject     |
|---|-------------|
| DAIRYING                                  |             |
| Prof. E. L. Crossley, B.Sc., F.R.I.C.     | 17, 22      |
| Anne Sheppard, N.D.D.                     | 17          |
| Valerie E. Cheke, N.D.D.                  | 17          |
| Joan Whitmore, B.Sc. (Dairying).          | 17          |
| HORTICULTURE                              |             |
| Prof. R. H. Stoughton, D.Sc., A.R.C.S.    | 2, 3, 9     |
| R. Barnwell, B.Sc. (Hortic.)              | 9, 28       |
| H. Fraser, N.D.H.                         | 9           |
| Doris R. Hole, B.Sc.                      | 9           |
| F. W. Webb, N.D.H.                        | 9           |
| J. R. Lloyd                               | 9           |
| Elsbeth M. Harris, B.Sc. (Hortic.)        | 9           |
| G. E. G. Mattingly, B.Sc.                 | 25          |
| Margaret D. A. Johnson, B.Sc. (Hortic.)   | 2, 9        |
| Edith Rollin, B.Sc. (Hortic.)             | 2, 9        |
| AGRICULTURAL CHEMISTRY                    |             |
| Prof. C. Tyler, B.Sc., Ph.D., A.R.I.C.    | 15, 25      |
| F. H. Grimbleby, B.Sc., Ph.D., A.R.I.C.   | 25          |
| T. G. Taylor, M.A.                        | 15, 25      |
| J. Tinsley, B.Sc. (Agr.), Ph.D., F.R.I.C. | 2           |
| A. Wild, B.Sc.                            | 2           |
| K. A. Hassall, B.Sc.                      | 5, 25       |
| AGRICULTURAL BOTANY                       |             |
| Prof. W. B. Brierley, D.Sc., F.L.S.       | 3, 4, 6, 20 |
| Adela G. Erith, B.Sc., Ph.D.              | 3           |
| J. S. L. Waldie, B.Sc.                    | 3, 7        |
| D. Snow, B.Sc. (Agr.), Ph.D.              | 3, 6, 20    |
| J. C. Sawyer, B.Sc. (Agr.).               | 3, 7        |
| Greta Haworth, M.Sc.                      | 3           |
| AGRICULTURAL BACTERIOLOGY                 |             |
| T. Richards, B.Sc., Ph.D.                 | 22          |
| Miss P. M. Frances Shattock, B.Sc., Ph.D. | 22          |
| Audrey Jones, B.Sc. (Dairying)            | 22          |
| VETERINARY SCIENCE                        |             |
| N. S. Barron, Ph.D., B.Sc., M.R.C.V.S.    | 16          |
| VETERINARY HYGIENE                        |             |
| N. P. Male, B.Sc., M.R.C.V.S., D.V.S.M.   | 16          |
| AGRICULTURAL ECONOMICS                    |             |
| (7, Redlands Road, Reading. Tel. : 4474). |             |
| Prof. E. Thomas, B.Litt., B.Sc.           | 27          |
| G. B. Bissett, B.Sc., M.Sc.               | 27          |
| L. G. Bennett, Dipl. Hort.                | 27          |



|  |               |
|--|---------------|
| C. H. Blagburn, B.Sc.                      | Subject<br>27 |
| T. W. Gardner, M.A.                        | 27            |
| Kennethina Matheson, B.Sc., N.D.A., N.D.D. | 27            |
| J. A. Mollett, B.Sc. (Agr.)                | 27            |
| R. H. Tuck, M.A.                           | 27, 29        |

## UNIVERSITY COLLEGE OF WALES

### Aberystwyth.

|  |                          |             |             |
|--|--------------------------|-------------|-------------|
| Prof. J. E. Nichols, M.Sc., Ph.D., F.R.S.E. : agriculture (animal husbandry).                                | 17, 18                   |             |             |
| Prof. W. Ellison, B.Sc., Ph.D. : agriculture (crop husbandry).   | 7, 8                     |             |             |
| J. L. Henderson, B.Sc. : agriculture (crop husbandry).   | 7, 8                     |             |             |
| G. Newman, B.Sc., N.D.A. : agriculture (farm management).  | 17                       |             |             |
| B. M. Short, M.Sc. : sheep and wool production.  | } animal                 | 17          |             |
| A. Osborne, B.Sc. : artificial insemination.   |                          | } husbandry | 17          |
| Mrs. M. Davies, B.Sc. : sheep ecology.   |                          |             | } research. |
| R. Phillips, M.Sc., A.R.I.C.   |                          | 17          |             |
| W. C. Evans, M.Sc., Ph.D., F.R.I.C.  | } animal health research | 5, 15, 25   |             |
| E. T. Rees Evans, B.Sc., M.R.C.V.S.  |                          | 15, 16      |             |
| R. A. Evans, M.Sc., A.R.I.C.   |                          | 25          |             |
| W. H. Parr, B.Sc.  |                          | 25          |             |
| Z. Mojzesowicz, B.Sc.  |                          | 25          |             |
| J. Lewis, B.Sc.  |                          | 8, 26       |             |
| R. W. Owen, M.Sc.  |                          | 21          |             |
| R. Isaac, B.Sc.  |                          | 15, 16      |             |
|  |                          |             |             |
| R. O. Davies, M.Sc., F.R.I.C., <i>Independent Lecturer and Head of Department of Agricultural Chemistry.</i> |                          | 2           |             |
| W. M. Ashton, B.Sc., Ph.D. : agricultural chemistry.   |                          | 2           |             |
| W. L. Jenkins, B.Sc. : agricultural chemistry.   |                          | 2           |             |
|  |                          |             |             |
| Prof. T. J. Jenkin, D.Sc. : agricultural botany ( <i>also Director of the Plant Breeding Station</i> )       |                          | 1, 4        |             |
| P. T. Thomas, B.Sc., Ph.D. : agricultural botany.  |                          | 4           |             |
| Ellis Griffiths, B.Sc. : agricultural botany.  |                          | 6, 20       |             |
|  |                          |             |             |
| John Lewis, M.Sc., N.D.A., N.D.D., <i>Director.</i>  | } dairying               | 17          |             |
| Miss E. Billing, B.Sc. : bacteriology.   |                          | 22          |             |
| Miss M. I. McIntosh, B.Sc.   |                          | 17          |             |

### DEPARTMENT OF AGRICULTURAL ECONOMICS

|                                |                          |    |
|--------------------------------|--------------------------|----|
| Prof. E. F. Nash, M.A.         | } agricultural economics | 27 |
| J. Pryse Howell, O.B.E., M.Sc. |                          |    |
| J. R. E. Phillips, M.A.        |                          |    |
| B. H. Roberts, B.Sc.           |                          |    |
| I. J. Thomas, B.Sc.            |                          |    |
| A. M. M. Rees, B.Sc.           |                          |    |
| W. D. Jones, B.Sc.             |                          |    |
| Miss A. D. Hooper, M.A.        |                          |    |
| Miss E. Johnson, B.A.          |                          |    |

## GREAT BRITAIN

Subject

### Welsh Plant Breeding Station

|   |       |
|---|-------|
| Prof. T. J. Jenkin, D.Sc., <i>Director</i> .                                | 1, 4  |
| E. T. Jones, <i>Officer in Charge of Cereal Breeding</i> .                  | 4     |
| Gwilym Evans, M.Sc., <i>Officer in Charge of Seed Multiplication</i> .      | 8, 12 |
| Ll. Iorwerth Jones, B.Sc., <i>Officer in Charge of Grassland Agronomy</i> . | 8     |
| A. R. Beddows, M.Sc., <i>Officer in Charge of Grass Breeding</i> .          | 4     |
| W. E. J. Milton, M.Sc., N.D.A. : grassland agronomy.                        | 8     |
| Ll. Phillips, B.Sc. : grassland agronomy                                    | 8     |
| D. J. Griffiths, B.Sc. : cereal breeding.                                   | 4     |
| Watkin Williams, M.Sc. : <i>Officer in Charge of Clover Breeding</i> .      | 4     |
| D. G. Miles, B.Sc. : seed multiplication.                                   | 8, 12 |
| H. M. Roberts, B.Sc. : seed multiplication.                                 | 8, 12 |
| W. Ellis Davies, B.Sc. : grass breeding.                                    | 4     |
| J. P. Cooper, B.Sc. : grass breeding.                                       | 4     |
| Roy Hughes, B.Sc. : grassland agronomy.                                     | 8     |
| Ieuan Davies, B.Sc. : grassland agronomy.                                   | 8     |
| Keith Jones, B.Sc. : cytology.  | 4     |
| A. Troughton, B.Sc. : grassland agronomy.                                   | 8     |
| A. J. H. Carr, B.Sc. : clover breeding.                                     | 4     |

## UNIVERSITY COLLEGE OF NORTH WALES

Bangor.

### Department of Agriculture

#### AGRICULTURE

|                            |    |
|----------------------------|----|
| E. J. Roberts, M.A., M.Sc. | 14 |
| G. M. Davies, B.Sc.        | 17 |
| G. L. Williams, B.Sc.      | 17 |

#### AGRICULTURAL ZOOLOGY

|                  |    |
|------------------|----|
| J. Hobart, B.Sc. | 19 |
|------------------|----|

#### AGRICULTURAL CHEMISTRY

|                                   |    |
|-----------------------------------|----|
| G. W. Robinson, M.A., Sc.D.       | 2  |
| W. McLean, B.A., D.Sc., A.R.C.Sc. | 15 |
| R. I. Davies, M.Sc.               | 2  |
| F. Smithson, D.Sc.                | 2  |

#### AGRICULTURAL BOTANY

|                               |       |
|-------------------------------|-------|
| R. Alun Roberts, B.Sc., Ph.D. | 3, 8  |
| R. Elfyn Hughes, B.Sc., Ph.D. | 3, 8  |
| D. W. Parry, M.Sc.            | 3, 8  |
| M. J. Mence, B.A.             | 6, 22 |

### Department of Forestry

|   |        |
|---|--------|
| E. C. Mobbs, O.B.E., M.A., B.Sc., For. Dip. | 1      |
| T. Thomson, M.Sc.                           | 10     |
| C. G. Dobbs, Ph.D., A.R.C.S.                | 20     |
| J. W. R. Sutherland                         | 10, 11 |
| T. H. Owen.                                 | 10     |
| F. C. Molesworth.                           | 28     |

## UNIVERSITY OF DURHAM

Faculty of Agriculture, King's College, Newcastle-upon-Tyne.  
 Prof. R. W. Wheldon, F.R.S.E., D.Sc., *Dean of the Faculty and  
 Professor of Agriculture and Rural Economy.*

1

## Faculty of Agriculture

|                                       |  |          |
|---------------------------------------|--|----------|
| Prof. H. C. Pawson, M.B.E., M.Sc.     | } Experimental studies of crop and animal husbandry. Studies of the effect of long-term fertiliser treatment. Cattle grazing habits correlated with productivity of grassland. | 7, 8, 18 |
| A. Main, B.Sc.                        |  |          |
| J. S. Hall, B.Sc. : animal husbandry. |  | 18       |

## AGRICULTURAL CHEMISTRY

|   |   |           |
|---|---|-----------|
| The Trace element content of individual grassland species.      |   |           |
| B. Thomas, M.Sc., A.I.C. : biological values of grass proteins. |   | 8, 15, 25 |
| F. Hunter, B.Sc., A.I.C.  | } studies of the structural constituents of grass particularly lignin and cellulose.  | 2         |
| A. Thompson, M.Sc.  |   | 2, 15, 25 |
| R. H. Armstrong, B.Sc.  |   | 2, 15, 25 |
| D. G. Armstrong, B.Sc.  | } Vitamins of B-complex in hay and in individual herbage species. Preliminary investigation into soil factors connected with colliery subsidence. | 2, 15, 25 |
| H. F. Wakler, B.Sc.   |   | 2, 15, 25 |

## AGRICULTURAL BOTANY

|   |   |                 |
|---|---|-----------------|
| Weed eradication by grazing and selective weed killers.   |   |                 |
| Prof. Martin Jones, M.Sc. : study of competition between various species of grasses and clovers.        |   | 3, 4, 8, 20, 15 |
| Mrs. H. H. Clark, M.Sc.   | } The effect of pre-treatment on the establishment of swards under controlled conditions of moisture. | 3, 4, 7, 8      |
| Mrs. A. A. Thompson, B.Sc.  |   | 3, 7, 8         |
| J. D. Smith, B.Sc. : factors influencing varietal resistance to club root in various cruciferous crops. |   | 6, 10           |

## AGRICULTURAL ENGINEERING

|  |  |    |
|--|--|----|
| The relative merits of manganese steel and normal cast iron plough shares.                               |  |    |
| Prof. E. M'Ewen, M.Sc., M.A.S.M.E., A.M.I.Mech.E. : theoretical investigations on transmission problems. |  | 28 |
| H. Fail, B.Sc.   | } attitude and effort on tractor controls. | 28 |
| G. C. Mouat, B.Sc.   |  | 28 |

## AGRICULTURAL ECONOMICS

*Farm Management Survey.*

|   |   |    |
|---|---|----|
| D. H. Dinsdale, M.A.<br>E. M. Carpenter, M.A.<br>T. Winter, N.D.A., Dip. Agr. | } Annual review of financial aspects of selected groups of farms.<br>A co-ordinated national investigation.<br>A nationally co-ordinated investigation into the economics of milk production.<br>Supplementary investigations into farm production costs. | 27 |
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## GREAT BRITAIN

Subject

### AGRICULTURAL BACTERIOLOGY

- Miss R. E. A. Allan, B.Sc., N.D.D. : the incidence of streptococci in the bovine udder, with particular reference to the significance of Group C. streptococci. 22

### ECONOMIC ENTOMOLOGY

- G. H. Harrison, F.R.S.E., B.Sc., Ph.D. : forest pests and pests of stored products. 19
- A. Milne, M.A., B.Sc., Ph.D., *A.R.C. unit of insect physiology* : field ecology ; at present working on garden chafer. 19
- R. Loughlin, B.A. : physiology of the garden chafer. 19
- T. P. McNicol, Dip. Agr. : experimental field work on garden chafer. 19

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- Prof. N. M. Comber, D.Sc., A.R.C.S., F.R.I.C., *Head of Department and Professor of Agricultural Chemistry*. 1, 2
- Prof. J. McGregor, B.Sc., N.D.A., N.D.D. 14, 17
- T. G. Boaz, M.B.E., M.A. 14, 18
- R. Holliday, B.Sc. 7, 8, 12
- S. Burr, M.Sc. 3, 6
- A. Powell Jones, M.Sc. 3, 4
- Miss D. M. Turner, M.Sc. 3, 6
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- A. N. Barker, M.Sc., Ph.D. 22
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- L. R. Johnson, M.Sc. 13, 19, 21
- N. H. E. Gibson, B.Sc., Ph.D. 13, 19, 21
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| K. W. Dent, B.Sc., Ph.D., <i>Lecturer in Agricultural Botany.</i>                    |  | 3     |
| Miriam M. Edwards, B.Sc., Ph.D., <i>Lecturer in Horticultural Botany.</i>            |  | 3     |
| D. K. McE. Kevan, B.Sc., A.I.C.T.A., <i>Lecturer in Agricultural Zoology.</i>        |  | 19    |
| Marjorie Brindley, N.D.D., <i>Lecturer in Bacteriology.</i>                          |  | 22    |
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## Research Institute in Animal Pathology

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| R. Lovell, D.Sc., Ph.D., M.R.C.V.S., D.V.S.M. : bacteriology.                         | 16, 22     |
| J. N. Oldham, Ph.D., B.Sc. : parasitology.  | 19, 21, 23 |
| E. Cotchin, M.R.C.V.S. : pathology.   | 16, 22     |
| C. A. E. Briggs, M.R.C.V.S. : pathology.  | 16, 22     |
| F. T. W. Jordan, B.Sc., M.R.C.V.S. : bacteriology.                                    | 16, 22     |

## GREAT BRITAIN

|   | Subject    |
|---|------------|
| T. W. F. Pay, M.R.C.V.S. : pathology.   | 16, 22     |
| W. Plowright, M.R.C.V.S. : pathology.   | 16, 22     |
| Miss H. G. Clark, M.Sc. : parasitology. | 19, 21, 23 |

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| Dr. C. D. Darlington : cytology. | 4, 9    |
| Dr. D. Lewis : genetics.         | 4, 9    |
| W. J. C. Lawrence : garden.      | 2, 4, 9 |

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| G. E. Marks, B.Sc. : pomology. | 4, 9 |
| Dr. A. J. Bateman : genetics.  | 4, 9 |

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| D. A. Bull.  | } | <i>Assistants (Scientific)</i>          | 28 |
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| <i>and Accountant.</i>                            |   |  |                |

## GREAT BRITAIN

|   | Subject                   |
|---|---------------------------|
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| R. A. M. Bell, B.Sc. (Agr.), <i>Assistant to Manager of Field Trials.</i>               | 7                         |
| J. C. Cullen, M.Sc., <i>Potato Investigation Officer</i>                                | 9, 22                     |
| E. Brown, B.Sc. (Agr.), <i>Assistant to Potato Investigation Officer.</i>               | 9                         |
| J. Munro, B.Sc. (Agr.), <i>Potato Virus Officer</i>                                     | 9, 22                     |
| A. F. Kelly, B.Sc. (Agr.), <i>Officer for Seed Propagations.</i>                        | 7                         |
| F. Earnshaw, M.A., Ph.D., Dip. Agric. (Cantab.), <i>Economic Botanist.</i>              | 3, 7, 12                  |
| C. G. Finch, M.C., B.Sc. (Hort.), <i>Horticultural Officer.</i>                         | 9                         |
| A. S. Gregg, B.Sc. (Agr.), ( <i>South Eastern Agric. College Wye</i> ).                 | crop improvement<br>work. |
| C. S. Elliott, B.Sc. (Agri.), ( <i>N.I.A.B. Headquarters.</i>                           |                           |
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| A. Kleczkowski, M.D., Ph.D.                            | 20 |
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| Marion A. Watson, M.A., Ph.D.                          | 20 |

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| Jane Meiklejohn, Ph.D.  | 22 |
| Janet E. Mollison, B.Sc., Ph.D.                                 | 20 |
| P. S. Nutman, B.Sc., Ph.D., A.R.Sc.                             | 22 |
| B. N. Singh, B.Sc., M.Sc., Ph.D., D.Sc.                         | 23 |
| F. A. Skinner, B.A.   | 22 |
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| B. W. Avery, B.Sc.,   | 2 |
| E. Crompton, M.Sc.  | 2 |

|                       | Subject |
|-----------------------|---------|
| C. A. H. Hodge, B.Sc. | 2       |
| D. W. King, B.Sc.     | 2       |
| W. A. Mitchell, B.Sc. | 2       |
| R. S. Seale, B.A.     | 2       |
| H. H. Le Riche, B.Sc. | 2       |

**Statistical Department**

|   |    |
|---|----|
| F. Yates, Sc.D., F.R.S., <i>Head of Department.</i> | 29 |
| D. A. Boyd, Ph.D.                                   | 29 |
| B. M. Church, B.Sc.                                 | 29 |
| Pamela M. Clarke, B.A.                              | 29 |
| Monica A. Creasey, B.Sc.                            | 29 |
| J. H. A. Dunwoody, B.A.                             | 29 |
| G. V. Dyke, M.A.                                    | 29 |
| Mrs. M. Hale, Cand. Real.                           | 29 |
| M. J. R. Healy, B.A.                                | 29 |
| G. M. Jolly, B.Sc.                                  | 29 |
| Mrs. R. Lord, B.Sc.                                 | 29 |
| H. D. Patterson, B.Sc.                              | 29 |
| Emily, P. Poulton, B.A.                             | 29 |

**Rothamsted Experimental Farm**

|   |   |
|---|---|
| J. R. Moffatt, B.Sc. (Agr.), N.D.A., A.I.B.A.E. | 2 |
|---|---|

**Biochemistry Department**

|   |    |
|---|----|
| N. W. Pirie, M.A., F.R.S., <i>Head of Department.</i> | 25 |
| E. Margaret Holden, B.Sc.                             | 25 |
| R. H. Kenten, B.Sc.                                   | 25 |
| P. J. G. Mann, B.Sc., Ph.D.                           | 25 |
| D. S. Miller, B.Sc. (Agr.).                           | 25 |
| M. V. Tracey, M.A.                                    | 25 |

**Nematology Department**

|  |    |
|--|----|
| T. Goodey, D.Sc., F.R.S., <i>Head of Department.</i> | 21 |
| D. W. Fenwick, M.Sc.                                 | 21 |
| Mary T. Franklin, B.Sc., Ph.D.                       | 21 |
| J. B. Goodey, B.Sc.                                  | 21 |
| B. G. Peters, M.Sc., Ph.D.                           | 21 |

**Field Experiments Section**

|                              |   |
|------------------------------|---|
| H. V. Garner, M.A., B.Sc.    | 2 |
| Kathleen J. Skidmore, N.D.D. | 2 |
| J. W. Weil, M.A.             | 2 |

**GRASSLAND RESEARCH STATION**

Drayton, Stratford on Avon, Warwickshire. Tel.: S/Avon  
3057. 'Grams: "Grassland" S/Avon 3356.

Hall Place Farm, Hurley, Berkshire. Tel.: Hurley 221.

|   |      |
|---|------|
| W. Davies, D.Sc., <i>Director.</i>                          | 1, 8 |
| T. E. Williams, B.Sc., <i>Principal Scientific Officer.</i> | 8    |

## GREAT BRITAIN

|  | Subject |
|--|---------|
| G. Pearson Hughes, B.Sc., <i>Senior Scientific Officer.</i>          | 8       |
| J. O. Green, B.Sc., <i>Scientific Officer.</i>                       | 8       |
| W. F. Raymond, B.A., A.R.I.C., <i>Scientific Officer.</i>            | 8, 15   |
| J. King, B.Sc., <i>Scientific Officer.</i>                           | 8       |
| R. D. Williams, B.Sc., <i>Scientific Officer.</i>                    | 3, 8    |
| Miss S. S. Champness, B.Sc., <i>Scientific Officer.</i>              | 8       |
| Miss A. Hub, B.Sc., <i>Scientific Officer</i> (probationary)         | 8       |
| D. E. Eyles, B.Sc., <i>Assistant Experimental Officer.</i>           | 8       |
| T. A. Evans, B.Sc., <i>Assistant Experimental Officer.</i>           | 8       |
| R. A. Redford, <i>Assistant Experimental Officer.</i>                | 8       |
| Miss V. G. Caukwell, B.Sc., <i>Assistant Experimental Officer.</i>   | 8       |
| Miss M. Cherry, B.Sc., <i>Assistant Experimental Officer.</i>        | 8       |
| Miss M. M. Sutherland, B.Sc., <i>Assistant Experimental Officer.</i> | 8       |
| Miss K. Ramsay, M.A., <i>Temporary Assistant.</i>                    | 8       |
| C. Harris, <i>Assistant (Scientific).</i>                            | 8       |
| N. Cuthbert, <i>Assistant (Scientific).</i>                          | 8       |
| N. Woolridge, <i>Assistant (Scientific)</i>                          | 8       |
| Miss J. Davy, <i>Assistant (Scientific).</i>                         | 8       |
| Miss M. Lunnun, <i>Assistant (Scientific).</i>                       | 8       |
| Miss P. Kelk, <i>Assistant (Scientific).</i>                         | 8       |
| Miss M. White, <i>Assistant (Scientific).</i>                        | 8       |
| Miss R. Collett, <i>Assistant (Scientific).</i>                      | 8       |
| B. Tyler, <i>Assistant (Scientific).</i>                             | 8       |

## EXPERIMENTAL AND RESEARCH STATION

Cheshunt, Herts.

|  |            |
|--|------------|
| W. F. Bewley, C.B.E., D.Sc., V.M.H., <i>Director.</i>                      | 1          |
| E. R. Speyer, M.A., F.R.E.S., <i>Entomologist.</i>                         | 19         |
| W. J. Parr, <i>Entomologist.</i>   | 19         |
| J. M. Garthwaite, B.Sc., <i>Entomologist.</i>                              | 19         |
| P. H. Williams, B.Sc., <i>Mycologist : general plant diseases.</i>         | 20         |
| Erna Grossbard, B.Sc. : anti-biotics.                                      | 20         |
| M. Ebben, B.A., <i>Mycologist.</i>   | 20         |
| J. E. Morton, <i>Mycologist.</i>   | 20         |
| J. M. Rice, B.Sc., <i>Chemist.</i>   | 20, 24     |
| R. Howles, B.A., Ph.D., <i>Mycologist : virus diseases.</i>                | 20         |
| W. H. Read, M.Sc., A.R.I.C., <i>Chemist : fungicides and insecticides.</i> | 19, 20, 24 |
| R. J. Smith, B.Sc., <i>Chemist : fungicides and insecticides</i>           | 19, 20, 24 |
| O. Owen, M.Sc., Ph.D., F.R.I.C., <i>General Chemist.</i>                   | 2, 24      |
| G. W. Winsor, B.Sc., A.R.I.C., <i>General Chemist.</i>                     | 24         |
| J. N. Davies, B.Sc., <i>General Chemist.</i>                               | 24         |
| J. H. Messing, B.Sc., <i>General Chemist.</i>                              | 24         |
| E. R. Leonard, D.Sc., A.R.C.S., <i>Plant Physiologist.</i>                 | 3          |

## HORTICULTURAL RESEARCH STATION

East Malling, Kent.

|  |         |
|--|---------|
| F. R. Stubbs, Ph.D., M.Sc., A.R.C.S., D.I.C., F.L.S., <i>Director.</i> | 1, 3, 9 |
| T. N. Hoblyn, Hort. Dip., <i>Assistant to Director.</i>                | 9, 20   |
| E. E. Cheesman, D.Sc., A.R.C.S., <i>Assistant to Director.</i>         | 3, 4, 9 |



**Pomology Section**

|  |         |
|--|---------|
| W. S. Rogers, M.A., D.Sc., Dip. Hort., A.Inst.P., <i>Head of Section</i> :                           | 2, 3, 9 |
| environmental conditions of fruit plants ; biennial bearing ; strawberries.                          |         |
| E. E. Cheesman, D.Sc., A.R.C.S. : applied botany ; plant breeding.                                   | 3, 4, 9 |
| Miss A. B. Beakbane, Ph.D., N.D.H. : histology ; culture of Rubi ; intensive culture of fruit trees. | 3, 9    |
| R. J. Garner, N.D.H., Dip. Hort. Sci. : propagation—cherry rootstocks.                               | 9       |
| D. W. P. Greenham, M.A. : manuring ; cover crops.  | 2, 8, 9 |
| H. M. Tydeman : plant breeding.  | 4, 9    |
| Miss E. M. Glenn, B.Sc. : field records ; walnuts ; rootstocks ; plums.                              | 9       |
| Miss I. Modlibowska, Ph.D. : frost damage studies.   | 3, 9    |
| A. P. Preston, N.D.H. : rootstock trials ; pruning ; meteorology.                                    | 9, 26   |
| Miss E. C. Thompson : histology ; apricots.  | 3, 9    |
| Miss B. G. Mosse, B.Sc., Dip. Hort. : histology.   | 3, 9    |
| Miss J. M. Paton, Hort. Dip. : field records.  | 9       |
| Miss D. J. Wilson, B.Sc. (Hort.) : field records ; rootstocks ; pears ; strawberries.                |         |
| Miss C. P. Nicoll, B.Sc. (Hort.) : propagation.  | 9       |
| C. H. W. Slater : frost damage studies—maintenance and construction of apparatus.                    | 9       |

**Hop Section**

|   |   |
|---|---|
| F. H. F. Beard, Hort. Dip. : hop culture. | 9 |
|---|---|

**Statistics Section**

|  |       |
|--|-------|
| T. N. Hoblyn, Hort. Dip., <i>Head of Section</i> : experimental design.  | 9, 29 |
| S. C. Pearce, B.Sc., <i>Deputy Head of Section</i> : experimental design and interpretation ; variation studies ; recording technique. | 29    |
| J. Taylor, M.A. : analysis of experimental results.  | 29    |
| Miss J. M. S. Thom : in charge of records ; statistical analysis.  | 29    |

**Plant Physiology Section**

|  |   |
|--|---|
| M. C. Vyvyan, M.A., D.Sc., <i>Head of Section</i> : physiology of fruit trees—growth and form ; abscission.  | 3 |
| Miss M. R. Rawes : auxin assay by Avena test.  | 3 |
| G. F. Trowell : measurement of growth, control of fruit drop.  | 3 |
| See Imperial College of Science and Technology, Institute of Plant Physiology, for four other workers collaborating with the Physiology and Biochemistry Sections. |   |

**Biochemistry Section**

|  |      |
|--|------|
| W. A. Roach, D.Sc., A.R.C.S., D.I.C., A.R.I.C., <i>Head of Section</i> : mineral nutrition of plants ; plant injection ; rootstock effect. | 2, 5 |
| A. E. Bradfield, D.Sc., <i>Senior Organic Chemist</i> .  | 5    |
| S. G. Thompson, M.C., M.A. : mineral nutrition of plants.  | 2, 5 |
| A. C. Mason, B.Sc., F.R.I.C., <i>Physical Chemist</i> .  | 5    |

## GREAT BRITAIN

Subject

|  |      |
|--|------|
| F. H. Vanstone, Ph.D., A.Inst.P., <i>Physicist</i> . |      |
| A. E. Flood, M.A., Ph.D., <i>Organic Chemist</i> .   | 5    |
| H. J. Philcox : spectrography.                       |      |
| Miss A. V. Delap, B.A., B.Sc. : plant injection.     | 2, 5 |

### Plant Pathology Section

|   |           |
|---|-----------|
| R. V. Harris, D.Sc., A.R.C.S., D.I.C., <i>Head of Section and of Scottish Raspberry Investigation</i> : general pathology of fruit and hops ; small fruit diseases. | 6, 20, 22 |
| M. H. Moore, Ph.D., M.Sc., Dip. Hort. Sci. : tree fruit diseases—fungicides.  | 6, 9, 20  |
| W. G. Keyworth, Ph.D., A.R.C.S., D.I.C. : hop diseases—verticillium wilts.  | 6, 20, 22 |
| A. F. Posnette, B.A., A.I.C.T.A. : virus diseases.  | 6, 22     |
| J. Paine, B.Sc., A.R.C.S. : virus diseases.   | 6, 22     |
| J. E. Crosse, B.Sc. : bacterial and fungus pathogens.   | 20, 22    |
| Miss M. Bennett, B.Sc. (Hort.), Hort. Dip., <i>Assistant</i> : field experiments.   | 6, 9      |
| Miss J. L. Smith, B.Sc., <i>Assistant</i> : laboratory studies.   | 20        |
| P. J. Ormerod, B.A. (Agr.) , <i>Assistant</i> : hop field experiments.  | 9         |
| Miss P. M. Goode, B.Sc., <i>Assistant</i> : hop diseases ; field experiments.   | 9         |

### Entomology Section

|  |        |
|--|--------|
| A. M. Massee, D.Sc., F.R.E.S., <i>Head of Section</i> : fruit insects and mites. | 19     |
| G. H. L. Dicker, Ph.D., A.R.C.S. : small fruit insects.                          | 19     |
| M. D. Austin, F.R.E.S. : Essex fruit tree red spider investigations.             | 19     |
| R. S. Pitcher, B.Sc. (Agr.) : raspberry cane midge ; strawberry eelworm.         | 19, 21 |
| Miss J. R. Groves, B.Sc. (Hort.) : fruit tree red spider.                        | 19     |

### Plant Protective Chemistry Section

|  |    |
|--|----|
| A. H. M. Kirby, M.Sc., Ph.D., A.R.I.C., <i>Head of Section</i> . | 24 |
| Miss B. S. Winton, B.A. : organic chemistry.                     | 24 |
| M. Allen, B.Sc. : physical chemistry.                            | 24 |
| D. S. Kirkham, B.Sc. : bioassay of fungicides.                   | 20 |
| K. S. McKinlay, B.Sc. : bioassay of insecticides.                | 19 |
| R. G. Gambrill, <i>Assistant</i> : bioassay of insecticides.     | 19 |
| L. J. Puleston, <i>Analyst</i> .                                 | 24 |

### Scientific Liaison Section

|  |   |
|--|---|
| H. B. S. Montgomery, B.A., Ph.D., D.I.C. : <i>Scientific Liaison Officer</i> . | 9 |
| A. C. Painter, O.B.E. : <i>Assistant Scientific Liaison Officer</i> .          | 9 |
| J. H. Walker, B.Sc. (Agr.) : <i>Assistant Scientific Liaison Officer</i> .     | 9 |

### Special Investigations

#### SCOTTISH RASPBERRY INVESTIGATIONS

(H.Q. University College, Dundee.)

|  |           |
|--|-----------|
| C. H. Cadman, B.Sc., Ph.D., <i>In charge of Investigations</i> : diseases. | 6, 20, 22 |
| C. A. Wood, Ph.D. : cultural problems.                                     | 6, 9      |

|   | Subject |
|---|---------|
| A. R. Hill, Ph.D. : insect pests.   | 19      |
| Miss T. Woolcombe, B.Sc. (Hort.), <i>Assistant</i> : diseases ( <i>stationed at E. Malling</i> ). | 9       |
| R. J. Rose, <i>Assistant</i> : glasshouse experiments.  | 9       |

#### ESSEX RED SPIDER INVESTIGATIONS

(H.Q. Field Laboratory, Great Braxted, Essex.)

|  |    |
|--|----|
| Miss E. Collyer, B.Sc. : predators of fruit tree red spider. | 19 |
|--|----|

#### BIENNIAL BEARING INVESTIGATIONS

|                             |      |
|-----------------------------|------|
| Miss M. H. E. Davies, B.Sc. | 3, 9 |
|-----------------------------|------|

### HARPER ADAMS AGRICULTURAL COLLEGE

Newport, Shropshire.

*Note*—The Officers concerned with Dairy Bacteriology, Entomology, and Mycology have been transferred to the new National Agricultural Advisory Service at "Woodthorne," Wergs Road, Tettenhall, Wolverhampton, the Economics Department to the Manchester University and the Veterinary Officers to the Ministry of Agriculture and Fisheries, New Haw, Weybridge, Surrey.

|  |      |
|--|------|
| W. T. Price, B.Sc. (Agr.), A.R.I.C.S., N.D.A., N.D.D., B.D.F.D., <i>Principal</i> .    | 1    |
| T. O. Wilson, B.Sc., A.R.I.C., <i>Head of Chemistry Department</i> .                   | 2    |
| J. R. Robertson, N.D.A., N.D.D., <i>Lecturer in Agricultural Engineering</i> .         | 28   |
| Dr. N. T. Gill, B.Sc., <i>Head of Biology Department</i> .                             | 3, 4 |
| Miss J. F. A. MacLagan, Ph.D., B.Sc., <i>Lecturer in Agricultural Botany</i> .         | 3, 4 |
| P. A. Missen, M.A., Dip. Agr. (Cantab.), <i>Senior Lecturer in Agriculture</i> .       | 7, 8 |
| J. R. Luscombe, N.D.A., N.D.D., <i>Lecturer in Agriculture</i> .                       | 18   |
| D. E. Richardson, M.A., <i>Crop Recorder</i> .   | 7    |
| R. B. Woodroffe, N.D.A., <i>Assistant Lecturer in Farm Accountancy and Economics</i> . | 27   |
| P. McDonald, B.Sc., <i>Lecturer in Agricultural Chemistry</i> .                        | 15   |

### NATIONAL INSTITUTE OF POULTRY HUSBANDRY

Newport, Shropshire

|  |        |
|--|--------|
| W. T. Price, B.Sc. (Agr.), P.A.S.I., N.D.A., N.D.D., B.D.F.D., <i>Director</i> .                   | 1      |
| H. Howes, <i>Assistant Director</i> .  | 1, 18  |
| H. Temperton, B.Sc., N.D.A., N.D.P., <i>Research Assistant and Lecturer in Poultry Husbandry</i> . | 15, 18 |
| F. J. Dudley, M.A., Dip. Agr., <i>Statistician</i> .   | 29     |
| W. King Wilson, <i>Rabbit Specialist</i> .   | 18     |
| Miss M. M. Wright, N.D.D., N.D.P., <i>Waterfowl Research Assistant</i> .                           | 18     |
| W. Moore, N.D.P., <i>Assistant Lecturer in Poultry Husbandry</i> .                                 | 18     |

### SEALE HAYNE AGRICULTURAL COLLEGE

Newton Abbot, Devon.

|   |                  |
|---|------------------|
| Prof. H. Ian Moore, M.Sc., Ph.D., N.D.A., Dip. Agr. (Cantab.) | 7, 8, 14, 15, 17 |
| G. F. Kingston, M.A. (Catab.)                                 | 7, 14            |



## GREAT BRITAIN

|  | Subject       |
|--|---------------|
| J. N. Craddock Turnbull, B.Sc., N.D.D.             | 15, 18        |
| G. R. Cooke, B.Sc. (Hons.)                         | 7, 8          |
| J. B. Paterson, N.D.A., C.D.A.D., A.M.I.B.A.E.     | 28            |
| H. R. Jenkins, N.D.P., C.D.P.                      | 18            |
| Miss H. R. Chapman, N.D.D., C.D.D. (Hons.)         | 17, 22        |
| Miss A. M. J. Cobbledick, N.D.D. (H.), C.D.D. (H). | 17            |
| K. E. Haine, B.Sc. Agr., B.A.                      | 4, 7          |
| D. F. Constantine, B.A. (Cantab.)                  | 7             |
| K. C. Vear, M.Sc.                                  | 3, 8          |
| J. G. Jenkinson, B.Sc.                             | 3, 20         |
| B. M. Dougall, M.Sc.                               | 2, 15, 24, 26 |
| J. S. Coe, B.Sc. (Hons.).                          | 2, 15, 24, 26 |
| G. D. Glynne Jones, B.Sc.                          | 19            |
| D. A. MacPherson, B.Sc., M.R.C.V.S.                | 15, 19        |

## SCOTLAND

### DEPARTMENT OF AGRICULTURE FOR SCOTLAND

#### Agricultural Advisory Service for Scotland

##### EDINBURGH AND EAST OF SCOTLAND COLLEGE OF AGRICULTURE

13, George Square, Edinburgh. 8. (Tel. : Edin. 42017).

|   |    |
|---|----|
| A. E. Cameron, M.A., D.Sc., F.R.S.E.                      | 19 |
| J. T. Stamp, B.Sc. (Vet. Sc.), M.R.C.V.S.                 | 16 |
| D. S. Witney, B.Com. (1st Class Honours).                 | 27 |
| D. N. Lawley, M.A., D.Sc.                                 | 29 |
| R. G. Heddle, M.A., B.Sc.                                 | 8  |
| A. M. Smith, Ph.D., D.Sc., A.I.C.                         | 2  |
| F. E. Moon, B.Sc., M.Sc., Ph.D., N.D.D. (Hons.), A.R.I.C. | 15 |

##### NORTH OF SCOTLAND COLLEGE OF AGRICULTURE,

41½, Union Street, Aberdeen. (Tel : Aberdeen 27205).

|  |    |
|--|----|
| E. P. Jeffree, B.Sc.                             | 19 |
| G. D. Morison, B.Sc., M.Sc., Ph.D.               | 19 |
| Eliz. Gray, B.Sc., Ph.D.                         | 20 |
| S. Jamieson, M.R.C.V.S., D.V.S.M.                | 16 |
| A. D. Imper, B.Sc. (Agr.), M.S.C., Ph.D., N.D.A. | 27 |
| J. Leslie Dawson, B.Sc. (Hons.)                  | 8  |
| D. A. McKenzie, B.Sc. (Agr.), N.D.A., N.D.D.     | 22 |
| R. G. C. Smith, B.Sc. (Agr.).                    | 18 |
| W. Moore, B.Sc. (Agr.) (Hons.), D.Sc.            | 24 |
| D. Clouston, M.A., B.Sc. (Agr.), D.Sc.           | 7  |
| R. Bain, B.Sc. (Agr.).                           | 7  |
| D. Robertson, B.Sc. (Agr.), D.Sc., Ph.D., N.D.A. | 21 |

##### WEST OF SCOTLAND AGRICULTURAL COLLEGE,

6, Blythswood Square, Glasgow, C.2. (Tel. : Glasgow Douglas 2241.)

|                                       |   |
|---------------------------------------|---|
| C. L. Whittles, B.A. (Cantab.), Ph.D. | 2 |
| J. Grainger, B.Sc., Ph.D.             | 6 |

|  | Subject                         |
|--|---------------------------------|
| G. Dunlop, B.Sc., B.Sc. (Agr.), Ph.D., N.D.A.D.              | 18                              |
| P. J. Jones, B.Sc. (Agr.).                                   | 7                               |
| R. J. Forsyth, A.R.I.B.A., A.R.I.A.S., Dip. Arch.            | } research on farm<br>building. |
| D. S. Soutar, A.R.I.B.A.                                     |                                 |
| D. M. Smillie, B.Sc. (Agr.), N.D.A., N.D.D. (Hons.).         | 28                              |
| A. L. Wilson, M.R.C.V.S.                                     | 17                              |
| J. A. Gilchrist, B.Sc., N.D.A., N.D.D.                       | 16                              |
| H. Nicol, B.Sc., M.Sc., Ph.D.                                | 27                              |
| K. W. Braid, B.Sc. (Agr.), B.Sc. (Pure Sc.), M.A.            | 24                              |
| D. S. MacLagan, B.Sc., Ph.D., D.Sc.                          | 8                               |
| J. F. Malcolm, M.Sc. (Lond.), D.Sc., N.D.A.D., F.A.C., Ph.D. | 19                              |
|  | 22                              |

### Seed Testing and Plant Registration Station, and Plant Pathology Service

East Craigs, Corstorphine, Edinburgh, 12. (Tel. : Edinburgh 67265/8).

|  |   |
|--|---|
| T. P. McIntosh, B.Sc. (Agr.), Ph.D., <i>Director</i> . | 1 |
|--|---|

#### SEED TESTING AND PLANT REGISTRATION STATION

|  |    |
|--|----|
| J. Mitchell, B.Sc. (Agr.).                 | 12 |
| J. L. Hardie, B.Sc. (Agr.), N.D.D., C.D.D. | 7  |
| A. W. McArthur, B.Sc. (Agr.).              | 7  |

#### PLANT PATHOLOGY SERVICE

|  |        |
|--|--------|
| C. E. Foister, B.A. (Hons.), Ph.D., Dip. Agr. Sc., <i>Plant Pathologist</i> .  | 6      |
| Miss M. J. M. Noble, B.Sc. (Hons. Botany), Ph.D. : general and seed pathology. | 6      |
| A. E. W. Boyd, B.Sc. (Hons. Bot. Chem.), Ph.D. : general and potato pathology. | 6      |
| D. M. Henderson, B.Sc. (Hons.) : virus diseases.                               | 20, 22 |
| Miss I. G. Montgomerie, B.Sc. (Hons. Botany).                                  | 20     |
| R. D. Reid : strawberry disease investigation. (Tel. Annbank 234).             | 4, 6   |

### Agricultural Economics

St. Andrews's House, Edinburgh, 1. (Tel. : Edinburgh 33433.)

|  |    |
|--|----|
| H. Whitby, B.Sc. (Agr.), <i>Advisory Officer in Agricultural Economics</i> . | 27 |
|--|----|

#### AGRICULTURAL ECONOMISTS

|                                   |    |
|-----------------------------------|----|
| R. B. Jones, B.Sc., M.Sc.         | 27 |
| O. J. Beilby, B.A., B.Litt., M.A. | 27 |

#### ASSISTANT AGRICULTURAL ECONOMISTS

|  |    |
|--|----|
| A. M. Mackenzie, B.Sc. (Agr.).                               | 27 |
| P. M. Scola, B.Sc. (Econ.), M.Sc. (Econ.).                   | 27 |
| G. F. Hendry, M.A. (Hons.).                                  | 27 |
| J. Wrigley, M.A. (Cantab.), B.A. (Cantab.), B.Litt. (Oxon.). | 27 |

### Scottish Agricultural Machinery Testing Station

Howden, Midcalder, Midlothian. (Tel. : Midcalder 221).

|  |    |
|--|----|
| W. J. West, B.A. (Cantab.), Hons. Dip. Agr. (Cantab.), <i>Director</i> . | 28 |
| G. G. Corbett, B.Sc. (Mech.).  | 28 |

**Food Infestation Control**

|   |    |
|---|----|
| 69, Berkeley Street, Glasgow, C.3. (Tel. : Glasgow/Douglas 7486). |    |
| D. W. Williams, B.Sc., M.Sc., Ph.D.                               | 19 |
| Mrs. M. M. Williams, B.Sc.  | 19 |

**UNIVERSITY OF ABERDEEN**

**Forestry Department**

|  |    |
|--|----|
| Prof. H. M. Steven, <i>Head</i> .  | 10 |
| Dr. E. V. Laing : study of variations in European Larch and other conifers.                | 10 |
| W. M. McNeill : influence of factors of site on the natural re-generation of tree species. | 10 |
| Myles Crooke : ecology of Genus <i>Evetria</i> .   | 19 |

**EDINBURGH UNIVERSITY**

**Department of Agriculture**

|   |           |
|---|-----------|
| Prof. S. J. Watson, M.Sc., D.Sc., F.R.I.C., <i>Head of Department</i> . | 1, 8, 15  |
| J. E. Gordon, B.Sc., Ph.D. : general agriculture.                       | 8, 12, 18 |
| A. E. Cox, B.Sc., : general agriculture.                                | 12, 27    |
| R. G. Johnston, B.Sc., N.D.A. : general agriculture                     | 12, 18    |

**Department of Botany**

|  |             |
|--|-------------|
| Prof. Sir. W. Wright Smith, M.A., D.Sc., LL.D., F.R.S., <i>Head of of Department</i> . | 1, 3, 9     |
| Alexander Nelson, Ph.D., D.Sc., N.D.A. : plant physiology and agricultural botany.     | 3, 4, 8, 30 |
| John Anthony, M.C., M.A., B.Sc. : forest botany.                                       | 10, 11      |
| Charles Andrew Lyall, B.Sc. : plant genetics and agricultural botany.                  | 3, 4, 8, 12 |
| Malcolm Wilson, D.Sc. : forest and agricultural mycology.                              | 6, 20, 22   |
| W. Blyth, B.Sc. : forest and agricultural mycology.                                    | 6, 20, 22   |

**Department of Animal Genetics**

|   |           |
|---|-----------|
| Prof. C. H. Waddington, Sc.D., F.R.S., <i>Head of Department and Laboratory</i> : physiological genetics. | 1, 13, 14 |
| C. Gordon, Ph.D. : physiological genetics.  | 13, 14    |
| A. D. Buchanan Smith, O.B.E., D.Sc., M.A., M.Sc., B.Sc. : live-stock genetics.                            | 14        |
| G. H. Beale, M.B.E., Ph.D., B.Sc., A.R.C.S. : microbiological genetics.                                   | 14        |
| C. Auerbach, Ph.D. : chemical mutagens.   | 14        |
| R. Lamy, Ph.D. : mutations.   | 14        |
| R. Freedman, B.A. : immunogenetics.   |           |

**Genetics Laboratory**

(See also under Agricultural Research Council, Animal Breeding and Genetics Research Organisation.)

|   |            |
|---|------------|
| R. A. Beatty, M.A. : polyploidy.                                    | 13, 14, 25 |
| H. G. Callan, B.A., Ph.D. : physiological cytogenetics.             | 14, 25     |
| D. S. Falconer, B.Sc., Ph.D. : selection.                           | 14, 17     |
| I. L. Mason, B.A. : dual purpose cattle.                            | 14, 17     |
| E. C. R. Reeve, B.A., Ph.D. : selection of quantitative characters. | 14, 17, 29 |
| J. M. Rendel, B.Sc., Ph.D. : dairy cattle.                          | 14, 17, 29 |



|  | Subject |
|--|---------|
| F. W. Robertson, Ph.D. : selection of quantitative characters. | 14      |
| A. Robertson, M.A. : statistics.                               | 14      |
| J. H. Sang, Ph.D. : physiological genetics.                    | 14      |
| M. Fischberg, Ph.D. : polyploidy.                              | 14      |
| A. Fraser, B.Sc. : wool.                                       | 14      |

### Department of Zoology

|  |    |
|--|----|
| Prof. James Ritchie, C.B.E., M.A., D.Sc., <i>Head of Department.</i>               | 1  |
| A. E. Cameron, M.A., M.Sc., D.Sc. : insect pests of farm crops, forests and stock. | 19 |
| G. F. Friend, M.A., B.Sc. : parasites of fresh-water fishes.                       | 16 |
| B. M. Jones, B.Sc. : trombicale and tyroglyphid mites                              | 19 |
| R. A. Killie, B.Sc. : helminth parasites of fishes.                                | 21 |
| D. O. Morgan, M.Sc., Ph.D. : helminths of domestic stock.                          | 21 |
| I. W. Parnell, B.A., Ph.D. : helminths of domestic stock.                          | 21 |
| C. Rayski, Ph.D., M.R.C.V.S. : helminths of domestic stock.                        | 21 |
| D. M. Steven, M.A., A.M., D.Phil. : physiology of colour.                          | 13 |

### Department of Agricultural and Forest Entomology

|   |    |
|---|----|
| A. E. Cameron, M.A., M.Sc., D.Sc., <i>Reader</i> : insect pests of farm crops, forests and stock. | 19 |
| J. W. McHardy, B.Sc. : agricultural and forest zoology.   | 19 |
| W. J. Guild, B.Sc., Ph.D. : soil fauna ; insect pests of cereals.                                 | 19 |
| J. Allan Campbell, B.A., M.R.C.V.S. : ecology of sheep tick.                                      | 19 |
| J. D. Matthews, C.D.A. : ecology of sheep tick.   | 19 |

### ROWETT RESEARCH INSTITUTE

Bucksburn, Aberdeenshire.

|   |       |
|---|-------|
| D. P. Cuthbertson, M.D., D.Sc., F.R.S.E., <i>Director.</i>    | 1, 15 |
| W. Godden, B.Sc., F.R.I.C., A.R.C.S., <i>Deputy-Director.</i> | 15    |
| W. Middleton, N.D.A., <i>Secretary and Treasurer.</i>         |       |
| W. L. Simpson, M.A., <i>Librarian.</i>                        |       |

### Biochemical Department

|   |        |
|---|--------|
| W. Godden, B.Sc., F.R.I.C., A.R.C.S., <i>Head</i> : factors affecting digestibility and absorption. | 15, 25 |
| J. Duckworth, B.S.A., D.Sc. : mineral nutrition and metabolism                                      |        |
| R. L. M. Synge, B.A., Ph.D. : protein chemistry.  |        |
| A. E. Oxford, M.Sc., Ph.D. : chemical microbiology.   |        |
| G. A. Levvy, B.Sc., Ph.D., D.Sc., F.R.I.C. : enzymology.  |        |
| Miss B. W. Simpson, M.A., B.Sc. : iodine nutrition and metabolism.                                  |        |
| K. J. Carpenter, M.A., Ph.D., B.Sc. : vitamins, biosynthesis and absorption.                        |        |
| E. I. McDougall, B.Sc., Ph.D., A.R.I.C. : protein chemistry.  |        |
| Miss M. I. Chalmers, B.Sc. : protein chemistry.   |        |
| Miss G. Ellinger, B.Sc., A.R.I.C. : mineral metabolism and nutrition.                               |        |
| M. J. Head, B.Sc. : factors affecting digestibility and absorption                                  |        |
| P. J. Heald, B.Sc., M.Sc. : chemical microbiology.  |        |
| J. Davidson, B.Sc., A.R.I.C. : analytical methods.  |        |
| Miss L. M. Kew, B.Sc., Ph.D. : enzymology.  |        |
| R. Pearcy, M.Sc. : mineral metabolism.  |        |

**Physiology Department**

|  |        |
|--|--------|
| A. T. Phillipson, M.A., Ph.D., M.R.C.V.S., <i>Head</i> : digestion and metabolism of the ruminant. | 13, 15 |
| Miss B. C. Laing, M.B., Ch.B. : absorption from the gut.   |        |
| Miss D. Duncan, B.Sc. : innervation of the stomach.  |        |
| Miss M. Masson, B.Sc. : action of digestive juices on rumen organisms.                             |        |

**Pathology and Bacteriology Department**

|  |                                       |        |
|--|---------------------------------------|--------|
| J. W. Howie, M.D., <i>Head</i> : effect of nutrition on resistance to infection. | bacteriology and immunology, viruses. | 15, 22 |
| J. M. Naftalin, M.B., Ch.B., D.P.H. : histology and experimental pathology.      |                                       | 15, 16 |
| Miss M. B. Richards, M.A., D.Sc., vitamins.                                      |                                       |        |
| F. Baker, F.R.M.S., D.I.C. : microbiology of digestion.                          |                                       |        |
| G. Hunter, B.Sc. : helminthology.  |                                       | 21     |
| W. A. Greig, B.Sc., M.R.C.V.S. : clinical pathology.                             |                                       | 16     |

**Applied Nutrition**

|  |  |        |
|--|--|--------|
| J. A. Crichton, M.A., B.Sc.                                | long term effects of iodinated protein : planes of nutrition in relation to milk production. | 15, 17 |
| J. Aitken, C.D.A.  |  | 15, 17 |
| D. E. Tribe, B.Sc., Ph.D.                                  | the behaviour of grazing animals.  | 15, 17 |
| J. C. Gordon, B.Sc.  |  | 15, 17 |
| J. C. Gill, B.Sc. : experiments on sheep.                  |  | 15, 17 |
| Miss J. R. McLagan, B.A., Dip. Agr. : experiments on pigs. |  | 15, 17 |

**Metabolic Section**

|  |    |
|--|----|
| W. Thomson : metabolism studies and feeding experiments. | 15 |
|--|----|

**Statistics Section**

|  |        |
|--|--------|
| A. W. Boyne, B.Sc. : design and analysis of nutrition experiments.   | 15, 29 |
| Miss M. J. Robertson, B.Sc., <i>Assistant Experimental Officer</i> . | 29     |

**Duthie-Craibstone Farm**

|  |                                       |        |
|--|---------------------------------------|--------|
| W. A. Biggar, M.C., B.Sc., <i>Head</i> :                                 | farm management and animal husbandry. | 15, 17 |
| A. P. Moore, B.Sc., Dip. Agr. (North of Scotland College of Agriculture) |                                       |        |
| W. J. Mudie.   |                                       |        |
| E. L. B. Haskew, <i>Assistant Experimental Officer</i> .                 |                                       |        |

**THE HANNAH DAIRY RESEARCH INSTITUTE**

|   |    |
|---|----|
| Kirkhill, Ayr.  |    |
| N. C. Wright, M.A., D.Sc., Ph.D. : <i>Director</i> .                      | 1  |
| J. A. B. Smith, B.Sc., Ph.D., D.Sc., F.R.I.C. : <i>Deputy Director</i> .  | 1  |
| P. S. Watts, B.Sc., Dip. Bact., Ph.D., F.R.C.V.S. : veterinary pathology. | 16 |

|  | Subject  |
|--|----------|
| E. C. Owen, B.A., B.Sc., M.Sc., Ph.D. : biochemistry           | 15, 25   |
| Miss C. Higginbottom, M.Sc., Dip. Bact., Ph.D. : bacteriology. | 22       |
| K. L. Blaxter, B.Sc., Ph.D., N.D.A. : animal nutrition.        | 15       |
| J. D. Findlay, B.Sc., Ph.D. : physiology.                      | 13       |
| Wm. Holmes, B.Sc. (Agr.), Ph.D. : animal husbandry.            | 7, 8, 17 |
| R. Waite, M.Sc. (Tech.), Ph.D. : technical chemistry.          | 24, 30   |
| Miss M. L. McNaught, B.Sc., Ph.D. : biochemistry.              | 15, 25   |
| D. W. F. Wheeler, B.Sc. : bacteriology.                        | 22       |
| J. C. D. White, B.Sc. : technical chemistry.                   | 24       |
| Miss J. Campbell, B.Sc. : technical chemistry.                 | 5, 24    |
| S. H. Yang, B.Sc., Dip. Agr. Sci., Ph.D. : physiology.         | 13       |
| J. E. Myatt, B.Sc. : animal husbandry.                         | 18       |
| Miss A. M. Goodall, B.Sc. : physiology.                        | 13       |
| Miss H. Alexander, B.Sc. : bacteriology.                       | 22       |
| Wm. Wood, B.Sc. : animal nutrition.                            | 15       |
| M. Grindlay, M.R.C.V.S. : veterinary pathology.                | 16       |
| W. R. Beakley, B.A. (Cantab.) : physiology.                    | 13       |

## THE MACAULAY INSTITUTE FOR SOIL RESEARCH

Craigiebuckler, Aberdeen.

Tel. Aberdeen 7391.

D. N. McArthur, D.Sc., Ph.D., F.R.I.C., F.R.S.E., *Director*. 1, 2, 24

### Pedology

|   |       |
|---|-------|
| R. Glentworth, B.S.A. (Manitoba), Ph.D., <i>Head</i> : soil survey (Scotland) | 2     |
| J. W. Muir, B.Sc. (Agr.), N.D.A., N.D.D. : soil survey (Scotland).            | 2, 24 |
| J. C. Romans, B.Sc. : soil survey (Scotland).                                 | 2     |
| B. D. Mitchell, B.Sc. : soil survey (Scotland).                               | 2, 24 |
| H. G. M. Hardie, Ph.D., A.R.I.C. : soil analysis.                             | 2, 24 |
| R. Hart, B.Sc., Ph.D. : soil geology and mineralogy.                          | 2     |
| G. F. Walker, B.Sc., Ph.D. : X-ray investigations.                            | 2     |
| R. C. Mackenzie, B.Sc., Ph.D., A.R.I.C. : physico-chemical investigations.    | 2, 24 |

### Spectrochemistry

|   |       |
|---|-------|
| R. L. Mitchell, B.Sc., Ph.D., R.F.I.C., <i>Head</i> . | 2     |
| R. O. Scott, B.Sc., Ph.D., A.R.T.C., A.R.I.C.         | 2, 24 |
| V. C. Farmer, B.Sc., Ph.D.                            | 2, 24 |
| Miss I. M. Mutch, B.Sc.                               | 2, 24 |
| A. M. Ure, B.Sc.                                      | 2     |

### Soil Organic Matter

|  |       |
|--|-------|
| G. K. Fraser, M.A., B.Sc. (For.), D.Sc., <i>Head</i> . | 2, 10 |
| R. I. Morrison, B.Sc., Ph.D. : chemistry.              | 2, 24 |
| D. M. Webley, B.Sc., M.Sc., Ph.D. : microbiology.      | 22    |
| Mrs. D. J. Eastwood, B.Sc. : microbiology.             | 20    |

### Plant Physiology

|                                      |         |
|--------------------------------------|---------|
| J. G. Hunter, B.Sc., Ph.D., F.R.I.C. | 2, 3, 5 |
|--------------------------------------|---------|



**Soil Fertility**

|  |    |
|--|----|
| A. B. Stewart, M.A., B.Sc., Ph.D., F.R.I.C., <i>Head (Deputy Director)</i> . | 2  |
| E. G. Williams, B.Sc., Ph.D.   | 2  |
| Miss A. J. Preddy, M.A.  | 2  |
| J. W. S. Reith, B.Sc. (Agr.), A.R.I.C.                                       | 2  |
| H. D. Welsh  |    |
| J. R. Devine, B.Sc. (Agr.) : field experiments.                              |    |
| R. H. E. Inkson, B.Sc., <i>Statistician</i> .                                | 29 |

**ANIMAL DISEASES RESEARCH ASSOCIATION**

Moredun Institute, Gilmerton, Edinburgh, 9.

|  |            |
|--|------------|
| J. Russell Greig, C.B.E., Ph.D., M.R.C.V.S., F.R.S.E., <i>Director</i> .                                   | 1          |
| A. D. McEwen, D.Sc., M.R.C.V.S., F.R.S.E., <i>Bacteriologist</i> .   | 22         |
| James Stewart, M.A., Ph.D., D.Sc., F.R.I.C., F.R.S.E., <i>Biochemist</i> .                                 | 15, 16, 25 |
| D. R. Wilson, D.Sc., M.R.C.V.S., D.V.S.M., F.R.S.E., <i>Research Assistant, Experimental Pathologist</i> . | 22         |
| A. Foggie, Ph.D., B.Sc., M.R.C.V.S., <i>Research Assistant</i> .   | 22         |
| Miss J. W. McCallum, Ph.D., B.Sc., <i>Assistant Bio-chemist</i> .  | 15, 16, 25 |
| A. M. Dunn, M.R.C.V.S.   | 16, 22     |
| H. A. Robertson, B.Sc.   | 15, 16, 25 |

**SCOTTISH SOCIETY FOR RESEARCH IN PLANT BREEDING**

Corstorphine, Edinburgh, 12.

|  |   |
|--|---|
| William Robb, N.D.A., F.R.S.E., <i>Director of Research</i> : cereals.                           | 4 |
| J. W. Gregor, Ph.D., D.Sc., F.L.S., <i>Senior Principal Scientific Officer</i> : herbage plants. | 4 |
| William Black, B.Sc., Ph.D., <i>Principal Scientific Officer</i> : potatoes.                     | 4 |
| V. McM. Davey, B.Sc., Ph.D., <i>Principal Scientific Officer</i> : root crops.                   | 4 |
| G. Cockerham, B.Sc., Ph.D., <i>Principal Scientific Officer</i> : virus diseases of potatoes.    | 4 |
| J. C. Haigh, B.Sc., Ph.D., A.R.C.S., <i>Senior Scientific Officer</i> : potatoes.                | 4 |
| Donald Cameron, B.Sc., <i>Senior Scientific Officer</i> : cereals.                               | 4 |
| Patricia J. Watson, M.A., Ph.D., <i>Scientific Officer</i> : herbage plants.                     | 4 |
| T. Mairi R. McGhee, B.Sc., <i>Scientific Officer</i> : virus diseases of potatoes.               | 4 |
| F. J. W. England, B.Sc., <i>Temporary Assistant Experimental Officer</i> : root crops.           | 4 |

**EDINBURGH AND EAST OF SCOTLAND COLLEGE OF AGRICULTURE**

13, George Square, Edinburgh, 2.

|  |           |
|--|-----------|
| Professor Stephen Watson, M.Sc., D.Sc., F.R.I.C., F.R.S.E., <i>Professor of Agriculture and Principal of the College</i> . | 1, 8, 15  |
| A. M. Smith, D.Sc., F.R.I.C. : chemistry.  | 2, 11, 24 |
| E. E. Moon, M.Sc., Ph.D., A.R.I.C. }   | 8, 15, 25 |
| J. McGillivray, C.D.A. }   | 17, 24    |
| A. Comrie, B.Sc., A.R.I.C., Ph.D. }  | 8, 17, 24 |
| H. Tod, B.Sc., Ph.D. }   | 2, 5      |
| K. Simpson, B.Sc. }  | 2         |
| A. B. Calder, B.Sc. }  | 2, 5      |
| Jeanne Ingram, B.Sc. }   | 15        |

|   | Subject                                |
|---|--|
| E. W. Fenton, M.A., D.Sc. : botany.                                       | 3, 6, 8                                |
| E. W. Debney, B.Sc., Ph.D.  | 2, 3                                   |
| T. Gibson, D.Sc. : bacteriology.  | 22                                     |
| Anna C. Stirling, B.Sc.   | } Assistants : bacteriology            |
| D. J. Williams.   |  |
| L. M. Walker, B.Sc. : engineering.  | 22                                     |
| G. M. Stuart, M.B.E., N.D.H. : horticulture.                              | 28                                     |
| *R. G. Heddle, M.A., B.Sc. : botany.                                      | 9                                      |
| C. C. V. Batts, B.Sc. : plant pathology.                                  | 8, 12                                  |
| L. A. Mabbitt, B.Sc.  | } Assistants : } Soils ; manures ;     |
| D. H. McLeod, B.Sc.   |  |
| P. June Ineson, B.Sc.   |  |
| P. F. Kendall, B.Sc.  |  |
| I. D. West, B.Sc.   | } bacteriology. } dairy products ;     |
|   |  |
|   | } } bovine mastitis.                   |
|   |  |
|   | 22                                     |
|   | } Assistants : entomology.             |
|   |  |
|   | 19                                     |
| *D. Witney, B.Com. : agricultural economics.                              | 27                                     |
| *J. D. Nutt, B.A. : agricultural economics.                               | 27                                     |
| D. M. R. Leask, B.Sc.   | } Assistants : agricultural economics. |
| W. B. Duthie, B.Sc.   |  |
| J. R. Phillips, N.D.A.  |  |
| J. A. McLennan, B.Sc.   |  |
| J. W. Davis, B.Sc.  |  |
| E. Stewart, B.Sc.   |  |
| D. N. Lawley, M.A., D.Sc. : statistics.                                   | 29                                     |
| *J. T. Stamp, B.Sc., M.R.C.V.S., <i>Veterinary Investigation Officer.</i> | 16, 22                                 |
| J. A. Watt, B.Sc., M.R.C.V.S., }  | } Assistant Veterinary                 |
| D. I. Nisbet, B.Sc., M.R.C.V.S. }   |  |
| A. S. B. Wilson, B.Sc., <i>Experimental Farm Director.</i>                | 16, 22                                 |
|   | 1                                      |

### THE WEST OF SCOTLAND AGRICULTURAL COLLEGE

6, Blythswood Square, Glasgow, C.2.

|  |       |
|--|-------|
| Prof. John Kirkwood, O.B.E., B.Sc. (Agr.), N.D.A., N.D.D.,<br><i>Principal.</i>  | 1     |
| George Dunlop, Ph.D., B.Sc., N.D.A., N.D.D. : animal husbandry.                  | 18    |
| Wm. J. A. Payne, B.A. (Hons.), M.A.  | 18    |
| John Grainger, B.Sc., Ph.D. : plant pathology.                                   | 6     |
| H. F. Dovaston, B.Sc. : plant pathology.   | 6     |
| Donald F. Booth, B.Sc., M.Sc. : frost damage to crops (plant pathology).         | 6     |
| James A. Gilchrist, B.Sc. (Agr.), N.D.A., N.D.D., agricultural economics.        | 27    |
| Helen C. McIver, B.Sc. (Agr.), N.D.D., N.D.A., C.D.D.                            | 27    |
| Prof. D. M. Smillie, B.Sc., N.D.A., N.D.D. (Hons.) : dairying, milk utilization. | 17    |
| Margt. J. Orr, N.D.D., C.D.D., : dairying, milk utilization.                     | 17    |
| June Hainsworth, B.Sc. : dairying, milk utilization.                             | 17    |
| Prof. H. Nicol, B.Sc., M.Sc., Ph.D., F.R.I.C. : chemistry.                       | 2, 24 |
| C. L. Whittles, M.A., Ph.D. : chemistry.   | 2     |

\*Specialist Advisory Officer.

(See also Edinburgh University, Departments of Agriculture and Agricultural and Forest Entomology).

## GREAT BRITAIN

|  | Subject |
|--|---------|
| K. W. Braid, M.A., B.Sc. : botany.   | 3       |
| D. S. MacLagan, B.Sc., Ph.D., D.Sc. : zoology.   | 19      |
| James F. Malcolm, D.Sc., Ph.D., M.Sc. : bacteriology.  | 22      |
| Elizabeth Macquarrie, B.Sc., N.D.D. : investigation into the incidence of mastitis in dairy herds. | 22      |
| A. L. Wilson, M.R.C.V.S. : veterinary research.  | 16      |
| James M. Robertson, M.R.C.V.S. : veterinary research.  | 16      |
| W. G. Johnston, M.R.C.V.S. : veterinary research.  | 16      |

## NORTH OF SCOTLAND COLLEGE OF AGRICULTURE

Marischal College, Aberdeen.

|   |          |
|---|----------|
| Prof. T. L. Bywater, B.Sc., M.S., <i>Director of Research</i> .                       | 1        |
| Guy D. Morison, B.Sc., Ph.D. : entomology.  | 19       |
| A. D. Imper, B.Sc. (Agr.), M.Sc., Ph.D. : agricultural economics.                     | 27       |
| J. L. Dawson, B.Sc. (Hons.) : grassland management.                                   | 8        |
| Walter Moore, B.Sc. : agricultural chemistry.   | 24       |
| George Donald, B.Sc. : principles of agriculture.                                     | 12, 18   |
| John C. Grant, M.R.C.V.S. : veterinary hygiene.                                       | 13, 18   |
| David Clouston, M.A., B.Sc. (Agr.), D.Sc. : botany.                                   | 3, 12    |
| David Robertson, B.Sc. (Agr.), Ph.D., D.Sc., N.D.A. : agricultural zoology.           | 21       |
| R. Bain, B.Sc. (Agr.) : <i>Superintendent of Crop Experiments</i> .                   | 4, 7, 12 |
| M. A. H. Tincker, M.A., D.Sc., F.L.S. : horticulture.                                 | 9        |
| Alfred Hill, B.Sc., A.I.C. : agricultural chemistry.                                  | 2, 5, 24 |
| Samuel Jamieson, M.R.C.V.S., D.V.S.M. : veterinary investigation.                     | 16       |
| Elizabeth G. Gray, B.Sc., Ph.D. : mycology.   | 6, 20    |
| E. P. Jeffree, B.Sc. : bee research.  | 19       |
| Gordon Murray, B.Sc. (Agr.), N.D.A., N.D.D., A.M.I.B.A.E. : agricultural engineering. | 1        |
| Donald A. McKenzie, B.Sc. (Agr.), N.D.A., N.D.D. : agricultural bacteriology.         | 28       |
|   | 22       |

## ROYAL (DICK) VETERINARY COLLEGE

Summerhall, Edinburgh 9.

|   |    |
|---|----|
| Prof. W. M. Mitchell, M.C., T.D., M.B., Ch.B., B.Sc., M.R.C.V.S. : disabling diseases of horses.                            | 16 |
| Prof. G. F. Boddie, B.Sc., M.R.C.V.S., F.R.S.E. : ketosis in cows.  | 15 |
| Prof. A. Robertson, M.A., B.Sc., Ph.D., M.R.C.V.S., F.R.S.E. : effect of changes in diet on metabolism of domestic animals. | 15 |
| Prof. F. G. Boddie, B.Sc., M.R.C.V.S., F.R.S.E. : short wave therapy investigations.  |    |
| I. S. Beattie, B.Sc., M.R.C.V.S. : tuberculosis of bovine genitalia.  | 16 |
| J. S. Garside, M.R.C.V.S., D.V.S.M. : streptococci, distribution in domestic animals and toxin production.                  | 22 |
| F. Alexander, Ph.D., M.R.C.V.S. : effect of humoral agents on the horse's digestive tract.                                  | 13 |
| J. S. S. Inglis, B.Sc., M.R.C.V.S. : environmental conditions in animal buildings.  | 18 |
| D. E. Donald, B.Sc., M.R.C.V.S. : electrocardiograms of domestic animals.   | 13 |
| A. Marr, B.Sc., M.R.C.V.S. : clinical study of milk fever.  |    |
| W. I. M. Macintyre, M.R.C.V.S. : canine leptospirosis.  |    |



## NORTHERN IRELAND

## MINISTRY OF AGRICULTURE

Subject

## Chemical and Animal Nutrition Division

Queen's University, Belfast.

|   |          |
|---|----------|
| Prof. R. G. Baskett, O.B.E., M.Sc., A.R.I.C., <i>Head and Chief Scientific Officer to Ministry of Agriculture, Northern Ireland</i> : animal nutrition. | 2, 5, 15 |
| J. Houston, D.Sc., <i>Principal Scientific Officer</i> : dairy chemistry.   | 17       |
| K. L. Robinson, B.Sc., B.Agr., A.R.I.C., <i>Principal Scientific Officer</i> : animal nutrition.  | 2, 5, 15 |
| S. McConaghy, M.Agr., B.Sc., A.R.I.C., <i>Senior Scientific Officer</i> : soils.  | 2        |
| J. S. V. McAllister, D.F.C., D.F.M., B.Agr., <i>Scientific Officer</i> : soils.   | 2        |
| W. O. Brown, M.Agr., B.Sc., A.R.I.C., <i>Scientific Officer</i> : animal nutrition.   | 15       |
| J. W. Jordan, B.Agr., A.I.C.T.A., <i>Scientific Officer</i> : dairying.   | 17       |
| D. H. Parish, B.Sc., <i>Temporary Scientific Officer</i> : animal nutrition.  | 15       |

## Plant Pathology Division

|   |              |
|---|--------------|
| Prof. A. E. Muskett, D.Sc., A.R.C.S., M.R.I.A. : <i>Head</i> : mycology and plant pathology.          | 6, 9, 20, 22 |
| J. C. Taylor, B.Sc., B.Agr., <i>Senior Scientific Officer</i> : nursery and glasshouse crops.         | 6, 9         |
| J. Colhoun, B.Sc., M.Agr., Ph.D., D.I.C., <i>Senior Scientific Officer</i> : flax ; fruit ; mycology. | 6, 20        |
| E. L. Calvert, M.Agr., <i>Scientific Officer</i> : potatoes ; virus diseases.                         | 6, 22        |
| C. W. R. McCreary, M.Sc., A.I.C.T.A., <i>Scientific Officer</i> : flax ; plant pathology.             | 4, 6         |

## Field Botany Division

Elmwood Avenue, Belfast.

|   |             |
|---|-------------|
| P. A. Linehan, D.Sc., M.Agr., B.Agr.Sc., A.R.C.Sc.I., <i>Head</i> : economic botany.  | 3, 7, 8, 12 |
| Mrs. H. A. I. Dales, M.A., B.Sc., <i>Temporary Research Assistant</i> : seed testing. | 3, 12       |
| J. Lowe, B.Agr., <i>Temporary Research Assistant</i> : grassland.                     | 8, 12       |
| R. H. Stewart, B.Agr., <i>Temporary Research Assistant</i> : seed certification.      | 8, 12       |

## Agricultural Entomology Research Division

|  |        |
|--|--------|
| R. Chamberlain, B.A., Dip. Agr. (Cantab.), <i>Head</i> .                 | 19, 21 |
| G. F. Cockbill, B.Sc., Ph.D. (Lond.), <i>Senior Scientific Officer</i> . | 19, 21 |

## Plant Breeding Division

Stormont, Belfast.

|   |   |
|---|---|
| E. V. B. Wilson, B.Sc., <i>Head</i> .                       | 4 |
| D. J. Hodges, B.Agr., <i>Temporary Scientific Officer</i> . | 4 |

## GREAT BRITAIN

Subject

### Veterinary Research Division

Stormont, Belfast.

|  |    |
|--|----|
| H. G. Lamont, D.Sc., M.R.C.V.S., <i>Head</i> .                                 | 16 |
| W. R. Kerr, Ph.D., M.R.C.V.S., D.V.S.M., <i>Principal Scientific Officer</i> . | 16 |
| J. K. L. Pearson, B.Sc., M.R.C.V.S., <i>Scientific Officer</i> .               | 16 |
| D. Luke, B.Sc., M.R.C.V.S., <i>Scientific Officer</i> .                        | 16 |
| W. A. M. Gordon, M.R.C.V.S., <i>Scientific Officer</i> .                       | 16 |

### Animal and Crop Husbandry Division

Queen's University, Belfast.

|  |              |
|--|--------------|
| Prof. J. Morrison, B.Sc., N.D.A., <i>Head</i> : farm management.                           | 1, 8, 14, 18 |
| R. W. Hale, B.Sc. (Agr.), <i>Senior Scientific Officer</i> : animal breeding ; statistics. | 14, 29       |

### Dairy Bacteriology Division

Queen's University Belfast.,

|   |        |
|---|--------|
| P. Clerkin, B.Sc., A.R.C.Sc.I., B.Agr.Sc., <i>Head</i> : bacteriology.                          | 22     |
| N. R. Knowles, M.Sc., B.Sc.Agr., <i>Principal Scientific Officer</i> bacteriology preservation. | 22, 30 |
| J. G. Murray, B.Agr., <i>Scientific Officer</i> : bacteriology.                                 | 22     |
| J. Patton, B.Agr., <i>Experimental Officer</i> : bacteriology.                                  | 22     |

### Agricultural Economics Division

|  |    |
|--|----|
| V. Liversage, B.Sc., M.S., N.D.A., <i>Agricultural Economics Officer</i> . | 27 |
|--|----|

## AGRICULTURAL RESEARCH INSTITUTE OF NORTHERN IRELAND

Hillsborough, County Down.

|  |                           |             |
|--|---------------------------|-------------|
| R. G. Baskett, O.B.E., M.Sc., A.R.I.C. : research and experiments. | } <i>Joint Directors.</i> | 1, 2, 5, 15 |
| J. Morrison, B.Sc., N.D.A. : management.                           |                           |             |
| R. W. Hale, B.Sc. (Agr.) : statistics and animal breeding.         |                           | 14, 29      |
| Miss M. S. Lyons, <i>Manager of Poultry Research Station</i> .     |                           | 14, 15      |

# CANADA

## DEPARTMENT OF AGRICULTURE

Ottawa.

Subject

### Administration

|   |   |
|---|---|
| J. G. Taggart, C.B.E., B.S.A., D.Sc., <i>Deputy Minister.</i>   | 1 |
| J. G. Bouchard, B.A., Ing. Agr., Litt.D., LL.D., F.R.S.C., <i>Assistant Deputy Minister.</i>  | 1 |
| H. L. Trueman, B.S.A. : <i>Director, Administrative Services (Liaison Officer in Canada for the Commonwealth Agricultural Bureaux.)</i> | 1 |

### Science Service

|   |      |
|---|------|
| K. W. Neatby, B.S.A., M.S.A., Ph.D., LL.D., F.R.S.C., <i>Director of Science Service.</i>   | 1    |
| W. E. van Steenburgh, O.B.E., B.A., M.A., Ph.D. : <i>Associate Director.</i>  | 1    |
| W. F. Hanna, C.B.E., O.L.M. (U.S.), B.A., B.Sc., M.Sc., Ph.D., F.R.S.C., <i>Regional Research Adviser (Prairie Provinces) and Officer-in-Charge, Rust Research Laboratory, Winnipeg, Manitoba : cereal smuts.</i> | 1, 6 |
| W. C. Broadfoot, B.S., M.S., Ph.D., <i>Officer-in-Charge, Science Service Laboratories, Lethbridge, Alberta.</i>  | 1, 6 |
| J. A. Boyle, B.S.A., <i>Assistant to Director.</i>  | 1    |

### Division of Animal Pathology

#### ANIMAL DISEASES RESEARCH INSTITUTE

|  |    |
|--|----|
| Hull, Que. Headquarters, Experimental Veterinary Medicine.   |    |
| C. A. Mitchell, B.V.Sc., D.V.M., F.R.S.C., <i>Associate Director, Science Service, Chief of Division.</i>  | 1  |
| C. W. McIntosh, V.S., B.V.Sc., <i>Assistant Chief of Division and Head of Unit of Biological Products.</i> | 16 |
| Ronald Gwatkin, D.V.M., D.V.Sc., <i>Senior Research Officer : pullorum disease and diseases of swine.</i>  | 16 |
| P. J. G. Plummer, D.V.M., <i>Senior Research Officer : histopathology.</i>                                 | 16 |
| Christine E. Rice, B.A., M.A., Ph.D., <i>Senior Research Officer : serology and immunity.</i>              | 16 |
| H. Konst, D.V.M., <i>Research Officer : biological products.</i>   | 16 |
| R. V. L. Walker, D.V.M., <i>Research Officer : virus diseases.</i>   | 16 |
| Thos. Moore, D.V.M., <i>Junior Research Officer : Bang's disease.</i>                                      | 16 |
| C. Mackie, D.V.M., <i>Junior Research Officer : serology.</i>  | 16 |
| J. L. Byrne, B.A., B.Sc., M.Sc., <i>Senior Research Officer : bacteriology</i>                             | 16 |
| J. Wm. Pullin, D.V.M., <i>Junior Research Officer : mastitis.</i>  | 16 |
| Paul Boulanger, D.V.M., M.Sc. : <i>Junior Research Officer.</i>  | 16 |
| G. T. Bannister, D.V.M., M.R.C.V.S., D.V.P.H., <i>Junior Research Officer.</i>                             | 16 |
| E. P. B. Powell, M.R.C.V.S., <i>Junior Research Officer.</i>   | 16 |

### BRANCH LABORATORIES

#### VETERINARY RESEARCH LABORATORY

Lethbridge, Alberta.

|   |    |
|---|----|
| R. C. Duthie, B.V.Sc., D.V.Sc., <i>Officer in Charge.</i> | 1  |
| R. Connell, D.V.M., M.Sc., <i>Jr. Research Officer.</i>   | 16 |



## CANADA

|   | Subject |
|---|---------|
| <b>PATHOLOGICAL LABORATORY</b>  |         |
| Saanichton, B.C.  |         |
| E. A. Bruce, V.S., <i>Officer in Charge.</i>  | 16      |
| <b>POULTRY PATHOLOGY LABORATORY</b>   |         |
| Central Experimental Farm, Ottawa.  |         |
| A. B. Wickware, V.S., <i>Officer in Charge.</i>   | 16      |
| E. W. Bond, B.V.Sc., D.V.Sc., <i>Junior Research Officer : pullorum disease.</i>                        | 16      |
| <b>BRANCH LABORATORY PACIFIC AREA</b>   |         |
| Vancouver, B.C.   |         |
| I. W. Moynihan, D.V.M., M.Sc., <i>Officer in Charge.</i>  | 16      |
| <b>BRANCH LABORATORY, MARITIME AREA</b>   |         |
| Sackville, N.B.   |         |
| J. F. Frank, D.V.M., M.Sc., <i>Officer in Charge.</i>   | 16      |
| <b>PARASITOLOGICAL LABORATORY</b>   |         |
| Institute of Parasitology, Macdonald College, P.Q.  |         |
| W. E. Swales, B.V.Sc., Ph.D., <i>Senior Research Officer : parasitology.</i>                            | 16      |
| W. T. Oliver, D.V.M., <i>Junior Research Officer.</i>   | 16      |
| <b>Division of Bacteriology and Dairy Research</b>  |         |
| A. G. Lochhead, B.A., M.Sc., Ph.D., F.R.S.C., <i>Chief of Division.</i>                                 | 2, 22   |
| E. G. Hood, B.S.A., Ph.D., <i>Chief, Dairy Research.</i>  | 17      |
| C. K. Johns, B.S.A., M.Sc., Ph.D., <i>Senior Bacteriologist : food micro-biology ; dairying.</i>        | 17, 30  |
| A. H. White, B.S.A., M.S., <i>Associate in Dairy Research.</i>  | 17      |
| M. I. Timonin, B.S.A., M.Sc., Ph.D., <i>Bacteriologist : soil micro-biology.</i>                        | 2       |
| H. Katznelson, B.S.A., M.Sc., Ph.D., <i>Bacteriologist : bacterial physiology ; bee diseases.</i>       | 22      |
| A. H. Jones, B.S.A., M.S.A., <i>Associate Bacteriologist : fruit and vegetable preservation.</i>        | 30      |
| G. B. Landerkin, B.S.A., M.A., <i>Associate Bacteriologist : bacterial physiology ; antibiotics.</i>    | 22      |
| R. H. Thexton, B.S.A., M.S.A., <i>Assistant Bacteriologist : soil microbiology.</i>                     | 2       |
| R. H. Wallace, B.Sc., M.Sc., Ph.D., <i>Assistant Bacteriologist : soil microbiology.</i>                | 2       |
| C. E. Chaplin, B.S.A., M.Sc., <i>Assistant Bacteriologist : disinfectants</i>                           | 22      |
| Miss M. O. Burton, B.S.A., M.S.A., <i>Assistant Bacteriologist : bacterial physiology and taxonomy.</i> | 22      |
| K. N. Smith, B.Sc., M.Sc., <i>Assistant Bacteriologist : dairy bacteriology.</i>                        | 17      |
| <b>LABORATORY OF PLANT PATHOLOGY,</b>   |         |
| St. Catherines, Ontario.  |         |
| J. W. Rouatt, B.S.A., M.Sc., <i>Assistant Bacteriologist : soil micro-biology.</i>                      | 2       |

EXPERIMENTAL STATION, Summerland, British Columbia.

J. F. Bowen, B.S.A., M.S.A., *Assistant Bacteriologist* : food microbiology. 30

### Division of Botany and Plant Pathology

Central Laboratory, Central Experimental Farm, Ottawa.

J. H. Craigie, A.B., M.Sc., Ph.D., D.Sc., LL.D., F.R.S.C., *Associate Director, Science Service, Chief of Division.* 1

F. L. Drayton, B.S.A., Ph.D., F.R.S.C. : administration and mycology. 20

### BOTANY

H. A. Senn, B.A., M.A., Ph.D., *Senior Botanist* : taxonomy and cytology. 3

W. H. Minshall, B.S.A., M.Sc., Ph.D., *Botanist* : physiology. 3

J. R. B. Boivin, B.A., L.Sc., Ph.D., *Botanist* : taxonomy. 3

W. G. Dore, B.A., M.Sc., Ph.D., *Associate Botanist* : taxonomy and ecology. 3, 8

V. A. Helson, B.A., M.A., *Associate Botanist* : physiology. 3

C. Frankton, B.Sc., Ph.D., *Associate Botanist* : weeds. 8, 12

E. G. Anderston, B.S.A., M.Sc., *Assistant Botanist* : weeds. 12

R. J. Moore, B.A., M.A., Ph.D., *Assistant Botanist* : cytogenetics. 3, 4

W. M. Bowden, B.A., Ph.D., *Assistant Botanist* : cytogenetics. 3, 4

J. A. Calder, B.Sc., *Assistant Botanist* : taxonomy. 3

W. J. Cody, B.A., *Assistant Botanist* : taxonomy. 3

A. R. T. Buckley, *Assistant Curator* : arboretum. 9

### PLANT PATHOLOGY

J. W. Groves, B.A., M.A., Ph.D., *Plant Pathologist* : mycology. 20

A. J. Skolko, B.Sc.F., M.A., Ph.D., *Plant Pathologist* : seed-borne diseases. 6

A. W. McCallum, B.Sc.F., M.A., *Plant Pathologist* : forest pathology. 6

H. N. Racicot, B.A., *Associate Plant Pathologist* : diseases of fruit and vegetables. 6

I. L. Connors, B.A., M.A., *Associate Plant Pathologist* : plant disease survey and mycology. 20

D. B. O. Savile, B.S.A., M.Sc., Ph.D., *Associate Plant Pathologist* : mycology. 20

Miss R. Macrae, B.A., M.Sc., Ph.D., *Associate Plant Pathologist* : forest mycology. 20

Miss M. K. Nobles, B.A., M.A., Ph.D., *Associate Plant Pathologist* : forest mycology. 20

R. J. H. Baylis, B.Sc.A., *Assistant Plant Pathologist* : diseases of forage crops. 6

R. M. D. Sutton, B.A., *Assistant Plant Pathologist* : seed-borne bacterial disease. 6, 22

V. R. Wallen, B.Sc.A., M.Sc., *Assistant Plant Pathologist* : seed-borne diseases. 6

L. Cinq-Mars, B.A., B.S.A., *Assistant Plant Pathologist* : diseases of fruit. 6

|  | Subject |
|--|---------|
| Miss R. M. Horner, B.A., M.Sc., <i>Junior Plant Pathologist</i> : forest mycology.               | 20      |
| Miss C. G. McKeen, B.A., M.Sc., <i>Junior Plant Pathologist</i> : forest mycology.               | 20      |
| FIELD LABORATORIES OF AGRICULTURAL PLANT PATHOLOGY   |         |
| LABORATORY OF PLANT PATHOLOGY, Charlottetown, P.E.I.   |         |
| R. R. Hurst, B.S.A., <i>Plant Pathologist</i> : diseases of potatoes.                            | 6       |
| G. W. Ayers, B.Sc., M.Sc., <i>Associate Plant Pathologist</i> : potato nematode diseases.        | 6       |
| L. C. Callbeck, B.Sc., <i>Assistant Plant Pathologist</i> : diseases of potatoes.                | 6       |
| D. B. Robinson, B.Sc., M.Sc., <i>Assistant Plant Pathologist</i> : diseases of potatoes.         | 6       |
| LABORATORY OF PLANT PATHOLOGY, Kentville, N.S.   |         |
| J. F. Hockey, B.S.A., <i>Plant Pathologist</i> : diseases of fruits.                             | 6       |
| K. A. Harrison, B.S.A., M.Sc., <i>Associate Plant Pathologist</i> : diseases of fruits.          | 6       |
| D. W. Creelman, B.Sc., <i>Assistant Plant Pathologist</i> : diseases of fruits.                  | 6       |
| LABORATORY OF PLANT PATHOLOGY, Fredericton, N.B.   |         |
| D. J. MacLeod, B.A., M.A., Ph.D., <i>Plant Pathologist</i> : virus diseases of potatoes.         | 6, 22   |
| J. L. Howatt, B.S.A., M.Sc., <i>Associate Plant Pathologist</i> : diseases of potatoes.          | 6       |
| R. H. Bagnall, B.S.A., <i>Assistant Plant Pathologist</i> : virus diseases of potatoes.          | 6       |
| W. A. Hodgson, B.Sc.A., M.Sc., <i>Assistant Plant Pathologist</i> : diseases of vegetables.      | 6       |
| LABORATORY OF PLANT PATHOLOGY, St. Anne de la Pocatière, Que.                                    |         |
| C. Perrault, B.S.A., M.Sc., D.Sc., <i>Plant Pathologist</i> : diseases of field crops.           | 6       |
| R. O. Lachance, B.A., B.S.A., Ph.D., <i>Associate Plant Pathologist</i> : diseases of potatoes.  | 6       |
| H. Genereux, B.A., B.S.A., M.Sc., <i>Assistant Plant Pathologist</i> : diseases of potatoes.     | 6       |
| A. Payette, B.A., B.S.A., M.Sc., <i>Junior Plant Pathologist</i> : mycology.                     | 20      |
| LABORATORY OF PLANT PATHOLOGY, St. Catherines, Ontario.  |         |
| G. H. Berkeley, B.A., M.A., Ph.D., <i>Plant Pathologist</i> : diseases of fruit.                 | 6       |
| G. C. Chamberlain, B.S.A., <i>Associate Plant Pathologist</i> : diseases of fruit.               | 6       |
| R. S. Willison, B.A., M.A., Ph.D., <i>Associate Plant Pathologist</i> : virus diseases of fruit. | 6, 22   |
| J. K. Richardson, B.S.A., M.Sc., <i>Associate Plant Pathologist</i> : diseases of vegetables.    | 6       |
| R. G. Atkinson, B.S.A., Ph.D., <i>Assistant Plant Pathologist</i> : mycology.                    | 20      |



## LABORATORY OF PLANT PATHOLOGY, Harrow, Ontario.

- L. W. Koch, B.A., M.A., Ph.D., *Plant Pathologist* : diseases of field crops. 6
- A. A. Hildebrand, B.A., M.A., Ph.D., *Associate Plant Pathologist* : diseases of corn and soybeans. 6
- C. D. McKeen, B.A., Ph.D., *Associate Plant Pathologist* : diseases of vegetables. 6
- W. E. McKeen, B.A., M.Sc., Ph.D., *Associate Plant Pathologist* : diseases of sugar beets. 6

## RUST RESEARCH LABORATORY, Winnipeg, Manitoba.

- T. Johnson, B.Sc., B.S.A., M.S., Ph.D., *Plant Pathologist* : cereal rusts. 6
- J. E. Machacek, B.S.A., M.S.A., Ph.D., *Plant Pathologist* : cereal root diseases. 6
- W. L. Gordon, B.S.A., M.Sc., Ph.D., *Plant Pathologist* : mycology. 20
- W. A. F. Hagborg, B.S.A., M.A., Ph.D., *Plant Pathologist* : bacterial diseases. 6, 22
- A. M. Brown, B.S.A., M.Sc., *Assistant Plant Pathologist* : cereal rusts. 6
- B. Peturson, B.S.A., M.S., *Assistant Plant Pathologist* : cereal rust. 6
- W. Popp, B.S.A., M.Sc., *Assistant Plant Pathologist* : cereal smuts. 6
- W. J. Cherewick, B.S.A., M.Sc., Ph.D., *Assistant Plant Pathologist* : forage crop diseases. 6
- W. E. Sackston, B.S.A., M.Sc., Ph.D., *Assistant Plant Pathologist* : flax diseases. 6
- H. A. H. Wallace, B.Sc., *Assistant Plant Pathologist* : cereal root diseases. 6

## LABORATORY OF PLANT PATHOLOGY, Saskatoon, Saskatchewan.

- P. M. Simmonds, B.S.A., M.S., Ph.D., *Plant Pathologist* : diseases of cereals. 6
- B. J. Sallans, B.S.A., B.A., M.Sc., Ph.D., *Associate Plant Pathologist* : cereal root diseases. 6
- R. C. Russell, B.S.A., M.Sc., Ph.D., *Associate Plant Pathologist* : diseases of cereals. 6
- H. W. Mead, B.Sc., M.Sc., Ph.D., *Associate Plant Pathologist* : diseases of forage crops. 6
- R. J. Ledingham, B.Sc., M.Sc., *Assistant Plant Pathologist* : diseases of vegetables. 6

## LABORATORY OF PLANT PATHOLOGY, Edmonton, Alberta.

- G. B. Sanford, B.S.A., M.S., Ph.D., *Plant Pathologist* : diseases of potatoes. 6
- L. E. Tyner, B.Sc., M.Sc., Ph.D., *Associate Plant Pathologist* : root diseases of cereals. 6
- T. R. Davidson, B.Sc., *Assistant Plant Pathologist* : virus diseases of potatoes. 6, 22
- S. G. Fushtey, B.Sc.A., *Assistant Plant Pathologist* : diseases of cereals. 6

## LABORATORY OF PLANT PATHOLOGY, Lethbridge, Alberta.

- M. W. Cormack, B.S.A., M.Sc., Ph.D., *Plant Pathologist* : diseases of forage crops. 6

## CANADA

|  |       |
|--|-------|
| M. N. Grant, B.Sc., M.Sc., Ph.D., <i>Associate Plant Pathologist</i> :<br>diseases of cereals.   | 6     |
| D. W. A. Roberts, B.A., Ph.D., <i>Associate Botanist</i> : plant<br>physiology.                  | 6     |
| <b>LABORATORY OF PLANT PATHOLOGY, Summerland, B.C.</b>   |       |
| H. R. McLarty, B.A., M.A., Ph.D., <i>Plant Pathologist</i> : diseases of<br>fruit.               | 6     |
| M. F. Welsh, B.S.A., Ph.D., <i>Plant Pathologist</i> : virus diseases of<br>fruit.               | 6, 22 |
| G. E. Woolhams, B.A., M.Sc., <i>Associate Plant Pathologist</i> : diseases<br>of vegetables.     | 6     |
| T. B. Lott, B.S.A., <i>Assistant Plant Pathologist</i> : virus diseases of<br>fruit.             | 6, 22 |
| <b>LABORATORY OF PLANT PATHOLOGY, Vancouver, B.C.</b>  |       |
| R. E. Fitzpatrick, B.S.A., Ph.D., <i>Plant Pathologist</i> : diseases of fruit.                  | 6     |
| N. S. Wright, B.S.A., M.S.A., <i>Assistant Plant Pathologist</i> : diseases<br>of potatoes.      | 6     |
| Miss F. C. Mellor, B.S.A., <i>Assistant Plant Pathologist</i> : diseases of<br>fruit.            | 6     |
| H. N. W. Toms, B.A., <i>Junior Plant Pathologist</i> : diseases of fruit.                        | 6     |
| <b>LABORATORY OF PLANT PATHOLOGY, Saanichton, B.C.</b>   |       |
| W. Newton, B.S.A., M.Sc., Ph.D., <i>Plant Pathologist</i> : plant path-<br>ology and physiology. | 3, 6  |
| W. Jones, B.Sc., M.Sc., <i>Assistant Plant Pathologist</i> : diseases of<br>vegetables.          | 6     |
| R. J. Hastings, B.S.A., <i>Assistant Plant Pathologist</i> : diseases of<br>bulbs.               | 6     |
| J. E. Bosher, <i>Assistant Plant Pathologist</i> : diseases of bulbs.                            | 6     |
| <b>Field Laboratories of Forest Pathology</b>  |       |
| <b>LABORATORY OF FOREST PATHOLOGY, Fredericton, N.B.</b>   |       |
| V. J. Nordin, B.A., B.Sc.F., <i>Assistant Plant Pathologist</i> : forest<br>pathology.           | 6     |
| <b>LABORATORY OF FOREST PATHOLOGY, Toronto, Ont.</b>   |       |
| J. E. Bier, B.Sc.F., M.A., Ph.D., <i>Senior Plant Pathologist</i> : forest<br>pathology.         | 6     |
| L. T. White, B.Sc.F., B.A., M.A., <i>Associate Plant Pathologist</i> :<br>forest pathology.      | 6     |
| <b>LABORATORY OF FOREST PATHOLOGY, Saskatoon, Sask.</b>  |       |
| C. G. Riley, B.S.A., M.F., Ph.D., <i>Plant Pathologist</i> : forest pathology                    | 6     |
| <b>LABORATORY OF FOREST PATHOLOGY, Victoria, B.C.</b>  |       |
| R. E. Foster, B.A., B.Sc.F., <i>Associate Plant Pathologist</i> : forest<br>pathology.           | 6     |
| P. J. Salisbury, B.S.A., <i>Assistant Plant Pathologist</i> : forest<br>pathology.               | 6     |

- G. P. Thomas, B.A., B.Sc., *Assistant Plant Pathologist*: forest pathology. 6
- R. A. Waldie, B.A., B.Sc., *Assistant Pathologist*: forest pathology. 6

### Division of Chemistry

- J. C. Woodward, M.C. and bar., B.S.A., M.Sc., Ph.D., *Chief of Division*. 2, 5
- C. J. Watson, B.S.A., M.Sc., Ph.D., *Chemist in Charge*: animal nutrition. 15
- J. T. Jamon, D.S.O. and bar., B.Sc., *Chemist in Charge*: food investigations. 24, 30
- F. B. Johnston, B.A., M.A., Ph.D., *Chemist*: plant nutrition. 2, 5
- R. B. Carson, B.A., B.Sc., M.Sc., *Associate Chemist*: analytical chemistry. 5, 24
- Miss M. E. McKillean, B.Sc., M.S., *Associate Chemist*: organic chemistry. 5
- W. E. Nichol, M.A.Sc., *Assistant Chemist*: micronutrients. 2, 5
- R. Kasting, B.Sc., M.Sc., *Assistant Chemist*: pesticides. 5
- G. S. Harper, B.S.A., *Assistant Chemist*: fruit and vegetable processing. 24, 30
- L. E. Wright, B.Sc., *Chemist in Charge*: soils and fertilizers. 2
- H. J. Atkinson, B.A., M.Sc., Ph.D., *Chemist*: soil research. 2
- G. R. Giles, B.Sc., *Associate Chemist*: micronutrients in soils. 2
- R. F. Bishop, B.Sc., M.Sc., *Associate Chemist*: soil fertility. 2
- R. C. Turner, B.S.A., *Assistant Chemist*: soil physical chemistry. 2
- F. J. Sowden, B.S.A., M.Sc., Ph.D., *Assistant Chemist*: soil organic matter. 2
- H. M. Rice, B.A., *Assistant Chemist*: soil mineralogy. 2
- A. R. G. Emslie, B.S.A., M.S.A., D.Sc., *Chemist in Charge*: animal physiology and vitamins. 13, 15, 25
- C. E. Allen, B.A., *Chemist*: animal physiology. 13, 25
- D. H. Laughland, B.S.A., M.Sc., Ph.D., *Associate Chemist*: fat soluble vitamins. 13, 15, 25
- W. R. Settle, B.Sc., *Assistant Chemist*: histochemistry. 13, 25

### LABORATORY OF CHEMISTRY, Kentville, Nova Scotia.

- F. A. Herman, B.Sc., *Chemist in Charge*: pesticides. 5, 24
- C. R. MacEachern, B.Sc., M.S., *Assistant Chemist*: soils. 2
- D. Chisholm, B.Sc., *Assistant Chemist*: pesticides. 5

### LABORATORY OF CHEMISTRY, Summerland, British Columbia.

- C. G. Woodbridge, B.A., M.Sc., Ph.D., *Associate Chemist*: plant diseases. 2, 5
- J. M. McArthur, B.A., M.A., Ph.D., *Associate Chemist*: pesticides. 5
- D. M. McLeod, B.S.A., *Assistant Chemist*: fruit and vegetable processing. 24, 30

### LABORATORY OF CHEMISTRY, Saanichton, British Columbia

- L. E. Lopatecki, B.A., B.S.A., *Assistant Chemist*: plant diseases. 5



# CANADA

|   | Subject |
|---|---------|
| <b>Division of Entomology</b>   |         |
| H. G. Crawford, B.S.A., M.S., <i>Assistant Director, Science Service, Chief of Division.</i>            | 19      |
| <b>FIELD CROP INSECT INVESTIGATIONS</b>   |         |
| H. L. Seamans, B.Sc., M.Sc., <i>Chief.</i>  | 19      |
| <b>FOREST INSECT INVESTIGATIONS</b>   |         |
| J. J. de Gryse, Ph.Cand.Lov., <i>Chief.</i>   | 19      |
| <b>FRUIT INSECT INVESTIGATIONS</b>  |         |
| W. A. Ross, B.S.A., <i>Chief.</i>   | 19      |
| <b>SYSTEMATIC ENTOMOLOGY.</b>   |         |
| G. P. Holland, B.A., M.A., <i>Chief.</i>  | 19      |
| <b>BIOLOGICAL CONTROL INVESTIGATIONS.</b>   |         |
| A. B. Baird, B.S.A., M.S., <i>Chief.</i>  | 19      |
| <b>STORED PRODUCT INSECT INVESTIGATIONS.</b>  |         |
| H. E. Gray, B.A., B.S.A., M.S., Ph.D., <i>Chief.</i>  | 19      |
| <b>HOUSEHOLD AND MEDICAL ENTOMOLOGY.</b>  |         |
| C. R. Twinn, B.S.A., M.Sc., Ph.D., <i>Chief.</i>  | 19      |
| <b>ENTOMOLOGICAL LABORATORIES, Ottawa, Ontario.</b>   |         |
| Robt. Glen, B.Sc., M.Sc., Ph.D., <i>Principal Entomologist, Research Assistant to Head of Division.</i> | 19      |
| A. G. Dustan, B.Sc., M.Sc., <i>Entomologist : vegetable insects.</i>                                    | 19      |
| A. D. Baker, B.S.A., M.Sc., Ph.D., <i>Entomologist : nematodes.</i>                                     | 21      |
| W. G. Matthewman, B.S.A., M.Sc., <i>Associate Entomologist : vegetable insects.</i>                     | 19      |
| V. E. Henderson, B.A., <i>Associate Entomologist : nematodes.</i>                                       | 21      |
| D. E. Gray, B.S.A., M.Sc., <i>Entomologist, Executive Assistant : forest insects investigations.</i>    | 19      |
| K. E. Stewart, B.Sc., M.Sc., <i>Associate Entomologist : reforestation and shade tree insects.</i>      | 19      |
| E. B. Watson, A.R.C.Sc., D.I.C., <i>Associate Entomologist : forest insects.</i>                        | 19      |
| Wm. Haliburton, B.Sc., M.S., <i>Associate Entomologist : Dutch elm disease.</i>                         | 19      |
| D. A. Quirke, B.Sc., M.Sc., Ph.D., <i>Associate Entomologist : birch tree insects.</i>                  | 19      |
| D. A. Ross, B.S.A., M.S., <i>Assistant Entomologist : forest insects.</i>                               | 19      |
| W. S. MacLeod, B.Sc., M.Sc., <i>Associate Entomologist : insecticides.</i>                              | 19      |
| W. J. Brown, A.B., M.Sc., <i>Entomologist : coleoptera.</i>   | 19      |
| G. S. Walley, B.S.A., M.Sc., <i>Entomologist : hymenoptera.</i>   | 19      |
| O. Peck, B.Sc., M.Sc., Ph.D., <i>Entomologist : hymenoptera.</i>  | 19      |
| T. N. Freeman, B.S.A., M.Sc., Ph.D., <i>Entomologist : lepidoptera.</i>                                 | 19      |
| G. E. Shewell, B.Sc., M.Sc., <i>Entomologist : diptera.</i>   | 19      |

|  | Subject |
|--|---------|
| D. F. Hardwick, B.A., M.Sc., <i>Assistant Entomologist</i> : lepidoptera.                            | 19      |
| G. E. Bucher, B.A., M.A., Ph.D., <i>Entomologist</i> : insect pathology.                             | 19      |
| J. W. Arnold, B.A., M.Sc., <i>Assistant Entomologist</i> : histology and toxicology.                 | 19      |
| J. H. Follwell, B.S.A., M.S.A., <i>Assistant Entomologist</i> : stored product insects.              | 19      |
| J. F. Sharp, B.A., <i>Assistant Entomologist</i> : biting fly studies.                               | 19      |
| C. G. MacNay, B.A., <i>Assistant Entomologist</i> : household insects ; Canadian insect pest review. | 19      |
| ENTOMOLOGICAL LABORATORY, Charlottetown, P.E.I.  |         |
| F. M. Cannon, B.Sc., M.Sc., <i>Associate Entomologist</i> : vegetable insects.                       | 19      |
| ENTOMOLOGICAL LABORATORY, Saint John's, Newfoundland.  |         |
| H. A. Butler, B.S.A., <i>Associate Entomologist</i> : field crop insects.                            | 19      |
| ENTOMOLOGICAL LABORATORY, Annapolis Royal, N.S.  |         |
| A. D. Pickett, B.S.A., M.Sc., <i>Entomologist</i> : fruit insects.                                   | 19      |
| N. A. Patterson, B.S.A., <i>Associate Entomologist</i> : orchard insecticides.                       | 19      |
| H. A. Stultz, B.S.A., M.Sc., <i>Associate Entomologist</i> : bionomics of fruit insects.             | 19      |
| F. T. Lord, B.S.A., <i>Associate Entomologist</i> : ecology.   | 19      |
| A. W. MacPhee, B.S.A., M.Sc., <i>Assistant Entomologist</i> : ecology.                               | 19      |
| ENTOMOLOGICAL LABORATORY, Halifax, N.S.  |         |
| F. G. Cuming, B.Sc., <i>Assistant Entomologist</i> : forest insect survey.                           | 19      |
| ENTOMOLOGICAL LABORATORY, Fredericton, N.B.  |         |
| R. E. Balch, B.S.A., M.Sc., Ph.D., <i>Senior Entomologist</i> : forest insects.                      | 19      |
| W. A. Reeks, B.Sc., M.Sc., <i>Entomologist</i> : forest insect survey.                               | 19      |
| R. F. Morris, B.Sc., M.Sc., Ph.D., <i>Entomologist</i> : forest management in relation to insects.   | 19      |
| L. J. Simpson, <i>Assistant Entomologist</i> : extension forest insects.                             | 19      |
| R. S. Forbes, B.Sc.F., M.Sc., <i>Assistant Entomologist</i> : forest insect survey.                  | 19      |
| Mrs. J. B. Adams, B.A., M.Sc., <i>Associate Entomologist</i> : potato aphid investigations.          | 19      |
| D. D. Pond, B.Sc., <i>Assistant Entomologist</i> : field crop insects.                               | 19      |
| Mrs. M. E. MacGillivray, B.Sc., <i>Junior Entomologist</i> : potato aphids.                          | 19      |
| C. W. B. Maxwell, B.S.A., M.Sc., <i>Associate Entomologist</i> : fruit insects.                      | 19      |
| ENTOMOLOGICAL LABORATORY, Hemmingford, P.Q.  |         |
| C. E. Petch, B.S.A., <i>Associate Entomologist</i> : orchard insects.                                | 19      |
| ENTOMOLOGICAL LABORATORY, Ste. Anne de la Pocatière.   |         |
| J. A. Duncan, B.Sc., M.Sc., <i>Assistant Entomologist</i> : vegetable insects.                       | 19      |

|   | Subject |
|---|---------|
| ENTOMOLOGICAL LABORATORY, Quebec, P.Q.  |         |
| L. J. Briand, B.S.A., <i>Assistant Entomologist</i> : biological control.   | 19      |
| G. R. F. Davis, B.Sc., M.Sc., <i>Junior Entomologist</i> : forest insects,<br>biological control of               | 19      |
| ENTOMOLOGICAL LABORATORY, St. Jean, P.Q.  |         |
| A. A. Beaulieu, B.S.A., B.Sc. : fruit insects.  | 19      |
| J. B. Maltais, B.S.A., M.Sc., <i>Associate Entomologist</i> : insect nutri-<br>tion.                              | 19      |
| J. P. Perron, B.S.A., <i>Junior Entomologist</i> : vegetable insects.   | 19      |
| ENTOMOLOGICAL LABORATORY, Belleville, Ont.  |         |
| A. Wilkes, B.S.A., M.S.A., Ph.D., <i>Senior Entomologist</i> : biological<br>control.                             | 19      |
| R. W. Smith, B.S.A., <i>Entomologist</i> : grasshoppers, wheat stem<br>sawfly.                                    | 19      |
| G. Wishart, B.S.A., M.Sc., <i>Entomologist</i> : field crop insect<br>parasites.                                  | 19      |
| T. Burnett, B.S.A., Ph.D., <i>Associate Entomologist</i> : population<br>ecology.                                 | 19      |
| H. L. House, B.S.A., Ph.D., <i>Associate Entomologist</i> : insect nutrition.                                     | 19      |
| H. G. James, B.A., M.A., <i>Associate Entomologist</i> : biting fly para-<br>sites ; reference collections.       | 19      |
| D. P. Pielou, B.Sc., Ph.D., <i>Associate Entomologist</i> : parasites of<br>fruit insects.                        | 19      |
| W. F. Baldwin, B.S.A., M.A., <i>Assistant Entomologist</i> : spruce and<br>pine sawflies.                         | 19      |
| H. C. Coppel, B.S.A., M.Sc., Ph.D., <i>Assistant Entomologist</i> : forest<br>insect parasites.                   | 19      |
| L. G. Monteith, B.S.A., M.S.A., Ph.D., <i>Assistant Entomologist</i> :<br>host parasites conditioning.            | 19      |
| L. R. Finlayson, B.S.A., <i>Assistant Entomologist</i> : spruce and pine<br>sawflies.                             | 19      |
| A. R. Graham, B.S.A., M.Sc., <i>Assistant Entomologist</i> : larch insects.                                       | 19      |
| M. J. Dever, B.A., M.A., <i>Junior Entomologist</i> : genetics.   | 19      |
| T. U. Finlayson, B.A., <i>Junior Entomologist</i> : grasshopper parasites.  | 19      |
| ENTOMOLOGICAL LABORATORY, Vineland Station, Ont.  |         |
| G. G. Dustan, B.S.A., M.Sc., <i>Entomologist</i> : fruit insects ; insect-<br>ticides.                            | 19      |
| T. Armstrong, B.S.A., M.Sc., <i>Associate Entomologist</i> : stone fruit<br>and pear insects.                     | 19      |
| W. P. G. Garlick, B.S.A., M.Sc., <i>Associate Entomologist</i> : codling<br>moth.                                 | 19      |
| W. L. Putman, B.S.A., M.S.A., <i>Associate Entomologist</i> : ecology.  | 19      |
| J. H. H. Phillips, B.S.A., M.S., <i>Assistant Entomologist</i> : insect<br>vectors of stone fruit virus diseases. | 19      |
| J. A. Hall, B.S.A., <i>Associate Entomologist</i> : Sub-Laboratory,<br>Simcoe, Ontario ; apple insects.           | 19      |
| H. R. Boyce, B.S.A., M.S.A., <i>Associate Entomologist</i> , Sub<br>Laboratory, Harrow, Ontario : peach insects.  | 19      |



## ENTOMOLOGICAL LABORATORY, Chatham, Ontario.

|  |    |
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| G. F. Manson, B.Sc., M.Sc., <i>Entomologist</i> : field crop insects.        | 19 |
| J. E. Armand, B.S.A., <i>Assistant Entomologist</i> : vegetable insects.     | 19 |
| D. A. Arnott, B.Sc., <i>Assistant Entomologist</i> : forage crop insects.    | 19 |
| H. B. Wressell, B.S.A., <i>Assistant Entomologist</i> : European corn borer. | 19 |
| G. E. Coppel, B.S.A., M.Sc., <i>Junior Entomologist</i> : wireworms.         | 19 |
| C. J. S. Fox, B.S.A., <i>Junior Entomologist</i> : tobacco insects.          | 19 |
| A. A. Wood, <i>Assistant Entomologist</i> : exhibition materials.            | 19 |

## ENTOMOLOGICAL LABORATORY, Marmora, Ont.

|  |    |
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| G. H. Hammond, B.S.A., M.Sc., <i>Associate Entomologist</i> : white grubs. | 19 |
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## ENTOMOLOGICAL LABORATORY, Sault Ste. Marie, Ont.

|   |    |
|---|----|
| M. L. Prebble, B.Sc., M.Sc., Ph.D., <i>Principal Entomologist</i> : forest insects. | 19 |
| J. McB. Cameron, B.S.A., M.Sc., Ph.D., <i>Entomologist</i> : physical ecology.      | 19 |
| W. G. Wellington, B.A., M.A., Ph.D., <i>Entomologist</i> : meteorology.             | 19 |
| G. H. Bergold, Ph.D., <i>Entomologist</i> : insect pathology.                       | 19 |
| S. G. Smith, B.Sc., M.Sc., Ph.D., <i>Entomologist</i> : genetics.                   | 19 |
| C. R. Douglas, B.Sc., M.Sc., <i>Associate Entomologist</i> : forest insect survey.  | 19 |
| F. T. Bird, B.S.A., <i>Associate Entomologist</i> : insect pathology.               | 19 |
| Donald A. Fraser, B.A., B.Sc., <i>Associate Entomologist</i> : ecology.             | 19 |
| J. R. Blais, B.Sc.F., <i>Assistant Entomologist</i> : forest entomology.            | 19 |
| R. M. Belyea, B.A., <i>Assistant Entomologist</i> : forest entomology.              | 19 |
| J. J. Fettes, B.Sc.F., <i>Assistant Entomologist</i> : forest entomology.           | 19 |
| R. J. Heron, M.Sc., <i>Assistant Entomologist</i> : insect physiology.              | 19 |
| B. M. McGugan, B.Sc., M.Sc., <i>Assistant Entomologist</i> : forest insect survey.  | 19 |
| Miss S. S. Morton, B.A., M.A., <i>Assistant Entomologist</i> : histology.           | 19 |

## ENTOMOLOGICAL LABORATORY, Winnipeg, Man.

|  |    |
|--|----|
| R. R. Lejeune, B.S.A., M.Sc., <i>Associate Entomologist</i> : forest insects.              | 19 |
| B. N. Smallman, B.A., M.A., Ph.D., <i>Associate Entomologist</i> : stored product insects. | 19 |
| F. L. Watters, B.Sc., <i>Assistant Entomologist</i> : stored product insects.              | 19 |

## ENTOMOLOGICAL LABORATORY, Brandon, Man.

|  |    |
|--|----|
| R. D. Bird, B.Sc., M.Sc., Ph.D., <i>Associate Entomologist</i> : field crop insects. | 19 |
| W. R. Allen, B.S.A., M.Sc., <i>Associate Entomologist</i> : toxicology, physiology.  | 19 |
| D. S. Smith, B.Sc., M.Sc., <i>Assistant Entomologist</i> : grasshopper nutrition.    | 19 |
| Miss F. E. Northcott, B.A., <i>Junior Entomologist</i> : grasshopper nutrition.      | 19 |

## ENTOMOLOGICAL LABORATORY, Indian Head, Sask.

- L. O. T. Peterson, B.Sc., M.Sc., *Associate Entomologist* : forest insects ; shelter belt insects. 19
- G. A. Bradley, B.S.A., M.Sc., *Assistant Entomologist* : forest insect survey. 19
- Miss M. E. Cumming, B.A., *Junior Entomologist* : forest insect survey. 19

## ENTOMOLOGICAL LABORATORY, Saskatoon, Saskatchewan.

- A. P. Arnason, B.Sc., M.Sc., Ph.D., *Entomologist* : field crop insects. 19
- H. McDonald, B.S.A., M.Sc., Ph.D., *Entomologist* : cutworms. 19
- H. W. Moore, B.Sc., M.Sc., *Associate Entomologist* : grasshoppers. 19
- H. A. McMahon, B.S.A., M.Sc., *Associate Entomologist* : forage crop insects. 19
- W. B. Fox, B.Sc., *Junior Entomologist* : wireworms. 19
- P. W. Riegert, B.A., *Junior Entomologist* : grasshoppers. 19
- A. R. Brooks, B.A., M.Sc., *Associate Entomologist* : systematic diptera. 19
- R. A. Fuller, B.A., B.S.A., *Junior Entomologist* : radio active tracer experiments. 19
- W. W. A. Stewart, B.Sc., *Junior Entomologist* : grasshoppers and wireworms. 19
- F. J. H. Fredeen, B.S.A., *Junior Entomologist* : household and medical entomology. 19

## ENTOMOLOGICAL LABORATORY, Lethbridge, Alberta.

- C. W. Farstad, B.Sc., M.Sc., Ph.D., *Entomologist* : field crops. 19
- R. W. Salt, B.Sc., M.Sc., Ph.D., *Entomologist* : ecological biology. 19
- H. Hurtig, B.Sc., Ph.D., *Associate Entomologist* : toxicology. 19
- L. A. Jacobson, B.Sc., M.Sc. : *Associate Entomologist* : say stink bug and cutworms. 19
- L. G. Putnam, B.S.A., M.Sc., *Associate Entomologist* : grasshoppers. 19
- G. A. Hobbs, B.S.A., M.Sc., *Associate Entomologist* : forage crop insects. 19
- P. E. Blakely, B.S.A., *Assistant Entomologist* : cutworms. 19
- G. E. Swailes, B.S.A., *Junior Entomologist* : vegetable insects. 19
- N. D. Holmes, B.Sc., M.Sc., *Junior Entomologist* : wheat stem sawfly. 19
- A. J. McGinnis, B.Sc., *Junior Entomologist* : wheat stem sawfly. 19
- Miss M. R. MacKay, B.Sc., *Junior Entomologist* : wheat stem sawfly. 19
- R. H. Painter, B.S.A., M.Sc., *Entomologist* : livestock insects. 19
- J. J. R. McLintock, B.Sc., *Associate Entomologist* : livestock insects. 19
- W. A. Nelson, B.Sc., M.Sc., *Assistant Entomologist* : livestock insects. 19

## ENTOMOLOGICAL LABORATORY, Calgary, Alberta.

- G. R. Hopping, B.Sc., M.Sc., *Entomologist* : forest insects. 19
- W. C. McGuffin, B.A., M.A., *Associate Entomologist* : forest insect survey. 19

## CANADA

Subject

### ENTOMOLOGICAL LABORATORY, Vernon, B.C.

- W. G. Mathers, B.S.A., M.Sc., *Associate Entomologist* : forest insects. 19  
D. K. Campbell, B.S.A., *Junior Entomologist* : forest insect survey. 19

### ENTOMOLOGICAL LABORATORY, Vancouver, B.C.

- J. H. MacLeod, B.Sc., M.Sc., *Associate Entomologist* : biological control. 19

### ENTOMOLOGICAL LABORATORY, Summerland, B.C.

- J. Marshall, B.S.A., M.Sc., Ph.D., *Entomologist* : fruit insects. 19  
C. V. G. Morgan, B.S.A., M.Sc., *Assistant Entomologist* : orchard mites. 19  
M. D. Proverbs, B.Sc., M.Sc., *Assistant Entomologist* : stone fruit insects. 19  
D. B. Waddell, B.A., M.A., Ph.D., *Assistant Entomologist* : insect vectors of virus diseases. 19

### ENTOMOLOGICAL LABORATORIES, Kamloops, B.C.

- J. D. Gregson, B.A., M.Sc., *Entomologist* : livestock insects ; ticks. 19  
R. D. Handford, B.S.A., M.Sc., Ph.D., *Entomologist* : field crop insects. 19  
T. K. Bourns, B.A., M.A., *Assistant Entomologist* : warble fly. 19  
C. L. Neilson, B.Sc., M.Sc., *Assistant Entomologist* : vegetable insects. 19  
L. C. Curtis, B.A., M.Sc., *Assistant Entomologist* : household and medical entomology. 19

### ENTOMOLOGICAL LABORATORY, Agassiz, B.C.

- R. Glendenning, *Assistant Entomologist* : field crop insects. 19  
H. G. Fulton, B.S.A., *Junior Entomologist* : carrot rust fly ; pea moth. 19

### ENTOMOLOGICAL LABORATORIES, Victoria, B.C.

- H. Andison, B.S.A., *Associate Entomologist* : fruit insects. 19  
H. Richmond, B.Sc., M.Sc., *Entomologist* : forest insects. 19  
K. M. King, B.Sc., M.Sc., Ph.D., *Entomologist* : field crop insects ; wireworms. 19

### Division of Plant Protection

- W. N. Keenan, *Chief of Division* : plant inspection and seed potato certification. 1  
H. A. U. Monro, B.S.A., M.Sc., *Senior Research Worker* : fumigation research. 19  
J. E. King, B.S.A., *Junior Research Worker* : fumigation research. 19

## EXPERIMENTAL FARMS

### Administration Division

- E. S. Archibald, C.B.E., B.A., B.S.A., D.Sc., F.R.S.C., *Merite Agricole, Director*. 1  
E. S. Hopkins, B.S.A., M.Sc., Ph.D., *Associate Director*. 1



R. R. McKibbin, B.S.A., Ph.D., *Experimental Projects.*  
 W. Dickson, B.A., *Research Specialist.*  
 F. W. Graves, M.R.A.I.C., : farm architecture.  
 H. H. Merrill, M.R.A.I.C. : farm architecture.  
 J. G. Laskie, A.R.I.B.A. : farm architecture.

### Division of Animal Husbandry

|  |       |
|--|-------|
| G. W. Muir, B.S.A., <i>Chief.</i>  | 1, 18 |
| E. B. Fraser, B.S.A., M.S., <i>Assistant</i> : swine.                    | 18    |
| P. E. Sylvestre, B.A., B.S.A., M.S., <i>Assistant</i> : beef cattle.     | 18    |
| C. D. MacKenzie, B.S.A., M.S.A., Ph.D., <i>Assistant</i> : dairy cattle. | 18    |
| S. B. Williams, B.S.A., M.Sc., <i>Assistant</i> : sheep.                 | 18    |
| V. S. Logan, B.S.A., M.Sc., <i>Assistant</i> : horses.                   | 18    |
| C. A. Gibson, B.S.A., <i>Assistant</i> : dairy manufacture.              | 17    |

### Division of Horticulture

|   |    |
|---|----|
| M. B. Davis, B.S.A., M.Sc., <i>Chief.</i>   | 1  |
| H. Hill, B.S.A., M.Sc., Ph.D., <i>Senior Officer</i> : plant nutrition.   | 2  |
| D. S. Blair, B.S.A., M.Sc., <i>Senior Officer, pomology, and Officer-in-Charge, Smithfield Sub-Station.</i>               | 9  |
| W. Ferguson, B.S.A., M.Sc., <i>Senior Officer</i> : vegetables.   | 9  |
| A. W. S. Hunter, B.S.A., M.Sc., Ph.D., <i>Senior Officer</i> : genetics and cytology.                                     | 4  |
| W. R. Phillips, B.S.A., M.S.A., <i>Senior Officer</i> : low temperature research.   | 30 |
| R. W. Oliver, B.S.A., <i>Senior Officer</i> : ornamental horticulture.  | 9  |
| F. S. Browne, B.S.A., <i>Senior Officer, co-operative experiments, and Officer-in-Charge, Ste. Clothilde Sub-Station.</i> | 9  |
| H. B. Cannon, B.S.A., Ph.D., <i>Senior Officer</i> : statistics.  | 29 |
| Mary MacArthur, B.Sc., A.M., Ph.D., <i>Senior Officer</i> : histology and morphology.                                     | 3  |
| A. P. Chan, B.S.A., M.Sc., Ph.D., <i>Senior Officer</i> : floriculture.   | 9  |
| N. M. Parks, B.S.A., <i>Senior Officer</i> : potato investigations.   | 9  |
| E. L. Eaton, B.S.A., <i>Senior Assistant</i> : native fruits.   | 9  |
| L. H. Lyall, B.S.A., M.S., <i>Senior Assistant</i> : vegetable breeding.  | 4  |
| J. J. Jasmin, B.Sc. (Agr.), <i>Assistant</i> : vegetable breeding.  | 4  |
| D. F. Cameron, B.S.A., <i>Assistant</i> : ornamental plant breeding.  | 4  |
| P. A. Poapst, B.Sc., B.Sc. (Agr.), <i>Assistant</i> : low temperature research.   | 30 |
| L. P. Spangelo, B.S.A., M.S.A., <i>Assistant</i> : fruit breeding.  | 4  |
| H. B. Heeney, B.S.A., <i>Assistant</i> : plant nutrition.   | 2  |
| S. H. Nelson, B.S.A., <i>Assistant</i> : pomology.  | 9  |
| N. R. Thompson, B.S.A., <i>Assistant</i> : potato investigations.   | 9  |
| R. W. Birch, B.S.A., <i>Assistant.</i>  | 4  |
| D. W. Evans, B.S.A., <i>Assistant.</i>  | 4  |
| J. E. McKillop, B.S.A., <i>Assistant.</i>   | 4  |
| R. H. Hikida, B.S.A., M.Sc., <i>Assistant.</i>  | 4  |
| I. D. W. Smith, B.S.A., <i>Assistant.</i>   | 4  |
| J. B. Tier, B.S.A., M.S.A., <i>Assistant.</i>   | 4  |

**Division of Field Husbandry, Soils and Agricultural Engineering**

|   |    |
|---|----|
| P. O. Ripley, B.S.A., M.S., Ph.D., <i>Chief</i> .                                 | 1  |
| A. J. Maclean, B.Sc., M.Sc., : soil fertility.                                    | 2  |
| W. E. Cordukes, B.Sc., M.Sc. : soil fertility.                                    | 2  |
| S. M. Donaldson, B.S.A. : pastures.   | 8  |
| G. Knowles, B.S.A. : weeds.   | 12 |
| N. Gordon, B.S.A. : projects.   | 29 |
| J. M. Armstrong, B.S.A. : agricultural engineering.                               | 28 |
| W. Kalbfleisch, B.E. (C.), B.E. (M), B.E. (A.), M.Sc. : agricultural engineering. | 28 |
| D. J. Cooper, B.Sc. : agricultural engineering.                                   | 28 |
| A. J. Magee, B.Sc. : agricultural engineering.                                    | 28 |
| J. W. White, B.S.A. : agricultural engineering.                                   | 28 |
| A. Leahey, B.Sc., M.Sc., Ph.D. : soil survey.                                     | 2  |
| P. C. Stobbe, B.S.A., M.Sc. : soil survey.  | 2  |

**SOIL SURVEYORS LOCATED IN PROVINCES.**

|   |   |
|---|---|
| G. B. Whiteside, B.S.A., Experimental Station, Charlottetown, Prince Edward Island.     | 2 |
| D. B. Cann, B.Sc., M.Sc., Agricultural College, Truro, Nova Scotia.                     | 2 |
| R. E. Wicklund, B.S.A., M.Sc., University of New Brunswick, Fredericton, New Brunswick. | 2 |
| K. K. Langmaid, B.Sc., University of New Brunswick, Fredericton, New Brunswick.         | 2 |
| J. L. P. Lajoie, B.A., B.Sc., M.Sc. } Macdonald College, Quebec.                        | 2 |
| J. F. G. Millette, B.Sc., M.Sc. }   | 2 |
| R. W. Baril, B.S.A., M.Sc. } College of Agriculture, Ste. Anne                          | 2 |
| B. Rochefort, B.A., B.S.A. } de la Pocatiere, Quebec.                                   | 2 |
| N. R. Richards, B.S.A., M.Sc. } Ontario Agricultural College,                           | 2 |
| J. E. Gillespie, B.S.A. } Guelph, Ontario.  | 2 |
| D. W. Hoffman, B.S.A., M.Sc. }  | 2 |
| W. A. Ehrlich, B.S.A., M.Sc. } University of Manitoba, Winnipeg,                        | 2 |
| L. E. Pratt, B.S.A. } Manitoba.   | 2 |
| H. C. Moss, B.S.A., M.Sc. }   | 2 |
| J. S. Clayton, B.Sc., M.Sc. } University of Saskatchewan,                               | 2 |
| W. K. Jansen, B.S.A., M.Sc. } Saskatoon, Sask.  | 2 |
| O. P. Bristol, B.S.A. }   | 2 |
| W. E. Bowser, B.Sc., M.Sc. }  | 2 |
| F. W. Peters, B.Sc., M.Sc. } University of Alberta,                                     | 2 |
| F. W. Schroer, B.S.A., M.Sc. } Edmonton, Alta.  | 2 |
| J. N. Leat, B.Sc. }   | 2 |
| L. Farstad, B.S.A., M.Sc. }   | 2 |
| A. P. Tzgoeff, B.S.A., M.Sc. } University of British Columbia,                          | 2 |
| T. M. Lord, B.S.A. }  | 2 |

**Cereal Division**

|   |   |
|---|---|
| C. H. Goulden, B.S.A., M.S.A., Ph.D., <i>Chief</i> .  | 1 |
| J. G. C. Fraser, B.S.A., <i>Chief Assistant</i> : spring wheat.                             | 4 |
| P. R. Cowan, B.S.A., <i>Senior Cerealist</i> : barley and peas.                             | 4 |
| A. G. O. Whiteside, B.S.A., M.S., <i>Senior Cerealist</i> : wheat quality and winter wheat. | 4 |

## CANADA

Subject

|   |   |
|---|---|
| R. A. Derick, B.S.A., M.Sc., <i>Senior Cerealist</i> : oats.                              | 4 |
| W. G. McGregor, B.S.A., M.S., Ph.D., <i>Senior Cerealist</i> : flax, beans and buckwheat. | 4 |
| D. G. Hamilton, B.S.A., M.S., Ph.D., <i>Senior Cerealist</i> : oats and barley.           | 4 |
| F. Gfeller, B.S.A., M.Sc., <i>Cerealist</i> : spring wheat.                               | 4 |
| J. Edgar, B.S.A., <i>Cerealist</i> : wheat quality and winter wheat.                      | 4 |
| H. Miller, <i>Assistant</i> : wheat quality.  | 4 |
| D. R. Hansen, B.Sc., <i>Junior Cerealist</i> : flax.                                      | 4 |

### Division of Forage Plants

|  |       |
|--|-------|
| T. M. Stevenson, B.S.A., M.Sc., Ph.D., <i>Chief</i> .                | 4, 8  |
| F. Dimmock, B.S.A., M.S.A., Ph.D. : corn, soybeans and sugar beets   | 4, 8  |
| J. M. Armstrong, B.S.A., M.S.A., Ph.D. : cytology, introductions.    | 8     |
| R. M. MacVicar, B.S.A., M.Sc. : grasses, seed production.            | 4, 8  |
| F. S. Nowosad, B.S.A., M.Sc. : pastures, field roots and statistics. | 8, 29 |
| J. H. Boyce, B.S.A., M.Sc. : turf research.                          | 8     |
| H. A. McLennan, B.S.A., M.Sc. : alfalfa, clovers.                    | 4, 8  |
| W. R. Childers, B.S.A., M.Sc. : grasses.                             | 4, 8  |

### Division of Illustration Stations

|  |              |
|--|--------------|
| J. C. Moynan, B.S.A., <i>Chief Supervisor of Illustration Stations</i> .                   | 1, 2, 12, 17 |
| A. E. Barrett, B.S.A., M.Sc., <i>Associate Chief Supervisor of Illustration Stations</i> . | 2, 12, 17    |
| R. R. Cairns, B.S.A., <i>Supervisor of Illustration Stations</i> .                         | 2, 29        |
| L. Bellefleur, B.A., B.S.A., <i>Supervisor of Illustration Stations</i> .                  | 2, 12, 17    |
| L. M. Casserly, B.A., B.S.A., <i>Supervisor of Illustration Stations</i> .                 | 2, 12, 17    |

(NOTE : Supervisors of Illustration Stations located in the various provinces are listed under the Branch Farms and Stations at which they have their headquarters).

### Bee Division

|  |           |
|--|-----------|
| C. A. Jamieson, B.S.A., <i>Chief</i> .               | 1, 13, 19 |
| J. H. Arnott, B.S.A., <i>Assistant</i> : apiculture. | 19        |

### Division of Economic Fibre Production

|  |   |
|--|---|
| R. J. Hutchinson, <i>Chief</i> .   | 2 |
| L. A. Cabana, B.S.A., L.S.A., <i>Assistant</i> : fibre.                                    | 2 |
| E. M. MacKey, B.S.A., <i>Officer-in-Charge</i> : Pilot Flax Mill, Portage la Prairie, Man. | 2 |
| W. O. Chubb, B.Sc., D.Sc., <i>Chemist</i> : Pilot Flax Mill, Portage la Prairie, Man.      | 5 |

### Poultry Division

|  |    |
|--|----|
| H. S. Gutteridge, B.S.A., M.Sc., <i>Chief</i> .                        | 1  |
| A. S. Johnson, B.Sc., M.Sc. : poultry geneticist.                      | 14 |
| M. Novikoff, B.S.A., M.Sc. : poultry nutritionist.                     | 15 |
| R. S. Gowe, B.S.A., M.S., Ph.D. : poultry geneticist and physiologist. | 14 |
| S. Bird ; poultry nutritionist.  | 15 |



**Tobacco Division**

|  |          |
|--|----------|
| N. A. MacRae, B.A., M.Sc., Ph.D., <i>Chief</i> . | 1        |
| E. T. McEvoy, B.Sc., M.Sc., : nutrition.         | 2        |
| L. E. Gilmore, B.S.A., M.A. : agronomy.          | 2, 25    |
| G. M. Ward, B.Sc., M.A. : plant physiology.      | 3, 5, 25 |
| F. H. White, B.Sc., M.Sc. : genetics.            | 4        |

**BRANCH FARMS AND STATIONS****Prince Edward Island****EXPERIMENTAL STATION, Charlottetown.**

|   |            |
|---|------------|
| R. C. Parent, B.S.A., M.S.A., <i>Superintendent</i> .             | 1          |
| B. F. Tinney, B.S.A., M.S.A., <i>Assistant in Poultry</i> .       | 14, 15, 17 |
| D. C. Schurman, B.S.A., M.S.A., <i>Assistant in Agronomy</i> .    | 2, 7, 8    |
| G. C. Warren, B.S.A., <i>Assistant in Horticulture</i> .          | 9          |
| W. N. Black, B.S.A., <i>Supervisor of Illustration Stations</i> . | 2, 7, 8    |
| Graeme Boswall, B.Sc., M.Sc., <i>Soil Specialist</i> .            | 2          |

**EXPERIMENTAL FOX RANCH, Summerside.**

|  |    |
|--|----|
| C. K. Gunn, B.Sc., M.Sc., Ph.D., <i>Superintendent</i> . | 1  |
| L. M. Bezeau, B.S.A., M.Sc., <i>Assistant</i> .          | 15 |

**Nova Scotia****EXPERIMENTAL STATION, Kentville, N.S.**

|  |           |
|--|-----------|
| A. Kelsall, B.S.A., <i>Superintendent</i> .                            | 1         |
| R. D. L. Bligh, B.S.A., <i>Assistant : horticulture</i> .              | 9         |
| C. J. Bishop, A.M., Ph.D., <i>Geneticist</i> .                         | 4, 9      |
| E. W. Chipman, B.Sc. (Agr.), <i>Vegetable Specialist</i> .             | 9         |
| D. L. Craig, B.Sc. (Agr.), <i>Small Fruits Specialist</i> .            | 9         |
| G. W. Hope, B.Sc. (Agr.), M.A., <i>Processed Products Specialist</i> . | 9, 30     |
| J. S. Leefe, B.S.A., <i>Field Crops Specialist</i> .                   | 2, 12     |
| R. P. Longley, M.S.A., <i>Tree Fruits Specialist</i> .                 | 9         |
| C. A. Eaves, B.S.A., M.Sc., <i>Storage Specialist</i> .                | 2, 9, 30  |
| F. B. Kinsman, B.S.A., <i>Supervisor of Illustration Stations</i> .    | 2, 12, 17 |

**EXPERIMENTAL FARM, Nappan.**

|  |           |
|--|-----------|
| W. W. Baird, B.S.A., <i>Superintendent</i> .                                     | 1         |
| C. D. T. Cameron, B.S.A., M.Sc., <i>Assistant, Animal Husbandry</i> .            | 18        |
| E. T. Goring, B.S.A., <i>Assistant in Field Husbandry</i> .                      | 2, 8      |
| J. D. E. Sterling, B.S.A., M.Sc., <i>Assistant in Cereals and Forage Crops</i> . | 4         |
| Thomas MacIntyre, B.Sc. (Agr.), M.Sc., <i>Assistant in Poultry Nutrition</i> .   | 15        |
| Lloyd P. Jackson, B.Sc. (Agr.), <i>Assistant in Field Husbandry</i> .            | 2, 8      |
| M. H. Jenkins, B.S.A., <i>Assistant in Poultry Husbandry</i> .                   | 14        |
| F. Calder, B.S.A., <i>Supervisor of Illustration Stations</i> .                  | 2, 12, 17 |

**New Brunswick****EXPERIMENTAL STATION, Fredericton.**

|   |       |
|---|-------|
| S. A. Hilton, B.S.A., M.Sc. (Agr.), <i>Superintendent</i> .             | 1     |
| J. M. F. MacKenzie, B.S.A., <i>Senior Cerealist and Agrostologist</i> . | 8, 12 |

## CANADA

|  | Subject   |
|--|-----------|
| L. C. Young, B.A., B.S.A., M.S., <i>Senior Horticulturist</i> .      | 4, 9      |
| R. G. White, B.S.A., <i>Horticulturist (Fruits and Vegetables)</i> . | 4, 9      |
| W. B. Collins, B.Sc. (Agr.), <i>Horticulturist (Small Fruits)</i> .  | 9         |
| H. T. Davies, B.S.A., <i>Potato Breeder</i> .                        | 4         |
| Leonard Griesbach, B.S.A., M.Sc., <i>Poultry Husbandman</i> .        | 14        |
| Richard Levick, B.S.A., <i>Animal Husbandman</i> .                   | 14, 18    |
| T. C. Chiasson, B.Sc. (Agr.), <i>Field Husbandman</i> .              | 2, 12     |
| A. A. MacLean, B.Sc. (Agr.), M.Sc., <i>Soil Specialist</i> .         | 2         |
| W. A. Burgess, B.S.A., <i>Supervisor of Illustration Stations</i> .  | 2, 12, 17 |
| E. A. Grant, B.S.A., <i>Supervisor of Illustration Stations</i> .    | 2, 12, 17 |

## Quebec

### EXPERIMENTAL STATION, Ste. Anne de la Pocatiere.

|   |           |
|---|-----------|
| J. R. Pelletier, B.S.A., M.A., M.Sc., <i>Superintendent</i> .           | 1, 8      |
| J. E. Godbout, B.A., B.S.A., <i>Assistant : agronomy</i> .              | 2         |
| B. Forest, B.A., B.S.A., M.Sc., <i>Assistant : horticulture</i> .       | 9         |
| F. M. Gauthier, B.S.A., M.Sc., <i>Assistant : agronomy</i> .            | 8         |
| L. Dessureaux, B.A., B.S.A., M.S., Ph.D., <i>Assistant : agronomy</i> . | 4         |
| R. Caron, B.S.A., <i>Supervisor of Illustration Stations</i> .          | 2, 12, 17 |

### EXPERIMENTAL SUB-STATION, Caplan.

|   |      |
|---|------|
| G. Provencher, B.A., B.S.A., <i>Officer-in-Charge</i> . | 1, 9 |
|---|------|

### EXPERIMENTAL STATION, Lennoxville.

|  |            |
|--|------------|
| J. A. Ste. Marie, B.S.A., <i>Superintendent</i> .                          | 1          |
| Paul Gervais, B.S.A., M.Sc., <i>Assistant : cereals and forage crops</i> . | 4, 7, 8    |
| W. S. Richardson, B.S.A., <i>Assistant : field husbandry</i> .             | 2, 7, 8    |
| E. A. Ouellette, B.S.A., <i>Assistant : forage crops</i> .                 | 3, 7, 8    |
| G. Lalande, B.S.A., <i>Assistant : animal husbandry</i> .                  | 14, 17, 18 |
| B. J. Finn, B.S.A., M.Sc., <i>Assistant : soil fertility</i> .             | 2          |
| O. Allard, B.S.A., <i>Supervisor of Illustration Stations</i> .            | 2, 12, 17  |

### EXPERIMENTAL STATION, L'Assomption.

|   |        |
|---|--------|
| R. Bordeleau, B.S.A., <i>Superintendent</i> .                             | 1      |
| C. E. Ste. Marie, B.S.A., <i>Assistant : horticulture</i> .               | 9      |
| J. Richard, B.A., B.S.A., M.Sc., <i>Tobacco Specialist</i> .              | 2, 12  |
| F. Coiteux, B.S.A., <i>Assistant : field husbandry</i> .                  | 12, 17 |
| J. A. Belanger, B.S.A., B.Ch., <i>Assistant : soils and fertilizers</i> . | 2      |

### EXPERIMENTAL STATION, Normandin.

|  |           |
|--|-----------|
| J. A. Belzile, B.S.A., <i>Superintendent</i> .                           | 1, 17     |
| J. E. Laplante, B.S.A., M.S., <i>Assistant : plant husbandry</i> .       | 12        |
| L. C. Larose, B.A., B.S.A., <i>Assistant : fodder plants</i> .           | 8         |
| G. E. Ouellet, B.A., B.S.A., <i>Assistant : horticulture</i> .           | 9         |
| G. H. Harvey, B.A., B.S.A., <i>Supervisor of Illustration Stations</i> . | 2, 12, 17 |

## Ontario

### EXPERIMENTAL STATION, Kapuskasing.

|  |           |
|--|-----------|
| M. R. Wiancko, B.S.A., <i>Officer-in-Charge</i> .                                      | 1         |
| L. A. Charette, B.S.A., <i>Assistant : animal husbandry ; apiculture and poultry</i> . | 18        |
| F. X. Gosselin, B.S.A., <i>Supervisor of Illustration Stations</i> .                   | 2, 12, 17 |

## EXPERIMENTAL STATION, Harrow.

|  |       |
|--|-------|
| H. F. Murwin, B.S.A., <i>Superintendent.</i>                     | 1     |
| R. J. Haslam, B.S.A., <i>Tobacco Specialist.</i>                 | 4     |
| G. F. H. Buckley, B.S.A., M.S., Ph.D., <i>Corn Specialist.</i>   | 4     |
| J. M. Fulton, B.S.A., <i>Soil Specialist.</i>                    | 2     |
| T. B. Harrison, B.S.A., M.Sc., <i>Fruit Specialist.</i>          | 9     |
| B. S. Hoegstedt, <i>Assistant Animal Husbandry and Cereals.</i>  | 4, 18 |
| C. G. Mortimore, B.S.A., M.S., <i>Assistant : corn breeding.</i> | 4     |
| L. F. Ounsworth, B.Sc., M.Sc., <i>Vegetable Specialist.</i>      | 4     |
| C. W. Owen, B.S.A., <i>Soybean Specialist.</i>                   | 4     |
| W. A. Scott, B.S.A., <i>Assistant : tobacco.</i>                 | 2     |

## EXPERIMENTAL SUB-STATION, Delhi.

|   |   |
|---|---|
| L. S. Vickery, B.S.A., M.Sc., <i>Officer-in-Charge.</i> | 1 |
| R. B. Rudd, B.S.A., M.Sc., <i>Soil Specialist.</i>      | 2 |
| A. R. Rusnell, B.S.A., <i>Assistant : tobacco.</i>      | 2 |

## EXPERIMENTAL SUB-STATION, Woodslee,

|   |   |
|---|---|
| J. W. Aylesworth, B.S.A., M.S., <i>Officer in Charge.</i> | 2 |
|---|---|

## DISTRICT EXPERIMENT SUB-STATION, Mindemoya.

|   |           |
|---|-----------|
| C. B. Dalton, B.S.A., <i>Supervisor of Illustration Stations.</i> | 2, 12, 17 |
|---|-----------|

## DISTRICT EXPERIMENTAL SUB-STATION, Fort William, Ont.

|  |           |
|--|-----------|
| J. K. Knights, B.S.A., <i>Supervisor of Illustration Stations.</i> | 2, 12, 17 |
|--|-----------|

## Manitoba

## LABORATORY OF CEREAL BREEDING, Winnipeg.

|   |      |
|---|------|
| R. F. Peterson, B.S.A., M.S., Ph.D. : cereal breeding.  | 1, 4 |
| J. N. Welsh, B.S.A., M.S., <i>Assistant : oat breeding.</i>   | 4    |
| A. B. Campbell, B.S.A., M.Sc., <i>Assistant : wheat breeding.</i>   | 4    |
| A. B. Masson, B.S.A., M.Sc., <i>Assistant : durum wheat breeding,</i><br><i>processing seed of cereals.</i> | 4    |
| A. E. Hannah, B.S.A., <i>Assistant : flax breeding.</i>   | 4    |
| J. E. Andrews, B.S.A., <i>Assistant : barley breeding.</i>  | 4    |

## EXPERIMENTAL STATION, Morden.

|   |            |
|---|------------|
| W. R. Leslie, B.S.A., <i>Superintendent.</i>                          | 1, 2, 4, 9 |
| W. J. Breakey, B.S.A., <i>Assistant : animal and field husbandry.</i> | 2, 17      |
| Chas. Walkof, B.S.A., M.Sc., <i>Assistant.</i>                        | 4, 9       |
| C. R. Ure, B.Sc., M.Sc., <i>Assistant.</i>                            | 4, 9       |
| A. L. Shewfelt, B.S.A., M.Sc., <i>Assistant.</i>                      | 5, 9       |
| W. A. Russell, B.S.A., M.S., <i>Assistant.</i>                        | 4, 8       |
| B. R. Wilkinson, B.S.A., M.S.A., <i>Assistant.</i>                    | 2, 3, 9    |

## EXPERIMENTAL FARM, Brandon.

|   |    |
|---|----|
| R. M. Hopper, B.S.A., M.Sc., <i>Superintendent.</i>                       | 1  |
| D. A. Brown, B.S.A., <i>Assistant : field husbandry.</i>                  | 12 |
| W. H. Johnston, B.A., M.Sc., <i>Assistant (Cereals) : plant breeding.</i> | 4  |
| E. Braun, B.S.A., M.Sc., <i>Assistant : apiculture.</i>                   | 9  |



## CANADA

Subject  
13

F. Graves, B.S.A., *Technical Officer Animal Husbandry and Poultry.*

B. J. Gorby, B.S.A., *Supervisor of Illustration Stations.*

D. A. Duncan, B.S.A., *Supervisor of District Experiment Sub-Stations.*

2, 12, 17

2, 12, 17

RECLAMATION STATION, Melita.

F. S. Gugin, B.S.A., *Assistant.*

2

## Saskatchewan

FORAGE CROPS LABORATORY, Saskatoon.

W. J. White, B.S.A., M.Sc., Ph.D., *Officer-in-Charge.*

1, 4, 8

J. L. Bolton, B.Sc., M.Sc., Ph.D. : alfalfa investigations.

4, 8

R. P. Knowles, B.S.A., M.Sc. : grass investigations.

4, 8

FOREST NURSERY STATION, Indian Head.

John Walker, B.Sc., M.S., *Superintendent.*

1, 10

W. H. Cram, B.S.A., M.Sc., *Plant Breeder.*

4, 10

J. Wilner, B.S.A., M.S., *Plant Physiologist.*

3, 10

FOREST NURSERY STATION, Sutherland.

W. L. Kerr, B.S.A., M.Sc., *Superintendent.*

1, 9, 10

EXPERIMENTAL FARM, Indian Head.

J. G. Davidson, B.A., B.S.A., M.S.A., *Officer-in-Charge* : agro- 1, 2, 4, 8, 12  
nomy.

W. W. Cram, B.S.A., *Assistant* : animal husbandry.

14, 15, 17

E. V. McCurdy, B.S.A., *Assistant* : field husbandry.

2, 12

E. Buglass, B.S.A., *Assistant* : agronomy.

2, 4, 8, 12

R. N. McIver, B.S.A., *Supervisor of Illustration Stations.*

2, 12, 17

EXPERIMENTAL SUB-STATION, Regina.

J. Roe Foster, B.S.A., *Superintendent.*

1, 7, 12

E. S. Molberg, B.Sc.

7, 12

EXPERIMENTAL STATION, Melfort.

H. E. Wilson, B.S.A., *Superintendent.*

1, 18

R. H. Anderson, B.S.A., *Assistant* : horticulture.

4

H. R. Ballantyne, B.S.A., *Assistant* : field crops.

4, 8

B. K. McDonald, B.S.A., *Assistant* : field husbandry.

2, 12

K. E. Bowren, B.S.A., *Supervisor of Illustration Stations.*

2, 12, 17

A. R. Mack, B.S.A., *Supervisor of Illustration Stations.*

2, 12, 17

EXPERIMENTAL STATION, Scott.

G. D. Matthews, B.S.A., *Superintendent.*

1

E. Van Nice, B.S.A., *Assistant* : animal husbandry.

18

A. G. Kusch, B.S.P., B.Sc., B.S.A., M.Sc., *Cereal*ist.

4

H. A. Friesen, B.S.A., M.Sc. : field husbandry.

12

E. F. Maas, B.S.A., M.S., *Soil Specialist.*

2

C. H. Keys, B.S.A., *Supervisor of Illustration Stations.*

2, 12, 17

W. R. Towill, B.S.A., *Supervisor of Illustration Stations.*

2, 12, 17

## EXPERIMENTAL STATION, Swift Current.

|   |    |
|---|----|
| G. N. Denike, B.S.A., <i>Superintendent.</i>                                | 1  |
| J. B. Campbell, B.Sc., <i>Assistant : agrostologist.</i>                    | 8  |
| R. E. McKenzie, B.Sc., M.Sc., <i>Assistant : agrostologist.</i>             | 4  |
| D. H. Heinrichs, B.S.A., M.Sc., <i>Assistant : plant breeding (forage).</i> | 4  |
| P. J. Janzen, B.S.A., <i>Assistant : field husbandry.</i>                   | 12 |
| J. P. Ficht, B.Sc., M.Sc., <i>Assistant : field husbandry.</i>              | 2  |
| J. L. Thompson, B.E., M.E., <i>Assistant : agricultural engineering.</i>    | 28 |
| H. D. Ayers, B.Sc., <i>Assistant : agricultural engineering.</i>            | 28 |
| A. Wenhardt, B.S.A., <i>Assistant : agricultural engineering.</i>           | 28 |
| M. E. Dodds, O.B.E., B.E., <i>Assistant : agricultural engineering.</i>     | 28 |
| H. C. Korven, B.Sc., <i>Assistant : agricultural engineering.</i>           | 28 |
| G. B. Harrison, B.S.A., <i>Assistant : agricultural engineering.</i>        | 28 |
| J. G. Kemp, B.E., <i>Assistant : agricultural engineering.</i>              | 28 |
| R. M. Blakely, B.S.A., <i>Assistant : turkey nutrition.</i>                 | 15 |
| H. I. MacGregor, B.Sc., M.Sc., <i>Assistant : turkey nutrition.</i>         | 15 |
| D. S. McBean, B.S.A., M.Sc., <i>Assistant : cereals.</i>                    | 4  |
| L. J. Anderson, B.S.A., <i>Assistant : agrostologist.</i>                   | 8  |
| M. R. Kilcher, B.S.A., <i>Assistant : agrostologist.</i>                    | 8  |
| R. W. Lodge, B.S.A., <i>Assistant : agrostologist.</i>                      | 8  |
| B. E. Murray, B.S.A., M.Sc., <i>Assistant : agrostologist.</i>              | 8  |
| P. J. Myhr, B.S.A., <i>Assistant : animal husbandry.</i>                    | 18 |
| J. S. Parker, B.Sc., <i>Assistant : agricultural engineering.</i>           | 28 |

## SOILS RESEARCH LABORATORY, Swift Current.

|  |      |
|--|------|
| J. L. Doughty, B.S.A., M.Sc., Ph.D., <i>Officer-in-Charge.</i> | 1, 2 |
| W. J. Staple, B.Sc., M.Sc. : soil physics.                     | 26   |
| J. J. Lehane, B.Sc., M.S.A. : soil physics.                    | 26   |
| F. Bisal, B.A., M.Sc. : soil physics.                          | 12   |
| F. G. Warder, B.S.A., : soil chemistry.                        | 2    |
| W. C. Hinman, M.Sc. : soil chemistry.                          | 2    |

## Alberta

## EXPERIMENTAL STATION, Lethbridge.

|  |    |
|--|----|
| A. E. Palmer, B.Sc., M.Sc., <i>Superintendent.</i>                   | 1  |
| D. T. Anderson, B.S.A., M.Sc., <i>Machinery Specialist.</i>          | 28 |
| H. Chester, B.S.A., <i>Head of the Field Husbandry Section.</i>      | 12 |
| Miss M. J. Fredeen, B.S.A. : alfalfa studies.                        | 4  |
| W. D. Hay, B.S.A., <i>Agronomist.</i>                                | 12 |
| H. J. Hargrave, B.Sc., <i>Co-ordinator Range Research.</i>           | 17 |
| K. W. Hill, B.Sc., M.Sc., <i>Agronomist.</i>                         | 2  |
| W. L. Jacobson, C.M., B.S.A., <i>Head, Irrigation Investigation.</i> | 2  |
| B. C. Jenkins, B.Sc., M.Sc., <i>Cereal Breeder.</i>                  | 4  |
| A. Johnston, B.S.A. : range research.                                | 8  |
| W. N. MacNaughton, B.Sc., M.Sc., <i>Animal Breeder.</i>              | 14 |
| L. E. Meldrum, B.Sc., M.Sc., <i>Animal Husbandman.</i>               | 17 |
| A. R. McFadden, B.S.A., <i>Irrigation Engineer.</i>                  | 28 |
| I. L. Nonnecke, B.Sc., <i>Head, Horticulture Section.</i>            | 9  |
| R. W. Peake, B.Sc., M.Sc., <i>Head, Forage Crop Section.</i>         | 8  |
| U. J. Pittman, B.Sc., <i>Soil Specialist.</i>                        | 2  |

## CANADA

|   | Subject   |
|---|-----------|
| A. W. Platt, B.Sc., M.Sc., <i>Head, Cereal Breeding Laboratory.</i>                             | 4         |
| J. J. Sexsmith, B.Sc., M.Sc., <i>Weed Specialist.</i>   | 12        |
| S. B. Slen, B.A., B.Sc., M.Sc., <i>Wool Specialist.</i>   | 18        |
| A. D. Smith, B.Sc., <i>Supervisor of Illustration Stations.</i>                                 | 2, 12, 17 |
| P. H. Walker, B.Sc. : <i>Field Husbandry and Irrigation.</i>                                    | 7         |
| Miss A. Wall, B.S.A., M.Sc., <i>Cereal Breeder.</i>   | 4         |
| S. A. Wells, B.S.A., M.Sc., <i>Cereal Breeder.</i>  | 4         |
| F. Whiting, B.Sc., M.Sc., Ph.D., <i>Animal Nutritionist.</i>                                    | 15        |
| <b>EXPERIMENTAL STATION, Lacombe.</b>   |           |
| G. E. DeLong, B.S.A., M.Sc., <i>Superintendent.</i>   | 1         |
| J. G. Stothart, B.S.A., M.Sc., <i>Assistant, Animal Husbandry.</i>                              | 14, 15    |
| H. T. Fredeen, B.S.A., M.Sc., <i>Assistant, Animal Husbandry.</i>                               | 14, 15    |
| A. D. McFadden, B.Sc., M.Sc., <i>Assistant, Cereals.</i>  | 4, 7      |
| H. W. Leggett, B.S.A., B.Sc., <i>Assistant : field husbandry.</i>                               | 2, 12     |
| H. B. Stelfox, B.Sc., M.Sc., <i>Assistant : forest crops.</i>                                   | 4, 8      |
| H. T. Allen, B.Sc., M.Sc., <i>Assistant : horticulture.</i>                                     | 9         |
| A. W. Wilton, B.S.A., <i>Supervisor of Illustration Stations.</i>                               | 2, 7      |
| A. R. Aitken, B.S.A., <i>Supervisor of Illustration Stations.</i>                               | 2, 7      |
| <b>RANGE EXPERIMENT STATION, Manyberries.</b>   |           |
| H. F. Peters, B.S.A., <i>Officer-in-Charge.</i>   | 1         |
| W. A. Hubbard, B.S.A., M.Sc., <i>Grazing Assistant.</i>   | 8         |
| <b>EXPERIMENTAL STATION, Beaverlodge.</b>   |           |
| E. C. Stacey, B.A., M.Sc., <i>Superintendent.</i>   | 1         |
| C. H. Anderson, B.Sc., <i>Assistant : agronomy.</i>   | 2         |
| A. C. Carder, B.S.A., M.Sc., <i>Assistant : field husbandry.</i>                                | 8, 12     |
| A. A. Guitard, B.Sc., M.Sc., <i>Assistant : cereals.</i>  | 4         |
| V. Chanasyk, B.Sc., <i>Assistant : horticulture.</i>  | 9         |
| D. J. Macdonald, B.S.A., <i>Supervisor of Illustration Stations.</i>                            | 2, 12, 17 |
| <b>EXPERIMENTAL SUB-STATION, Fort Vermilion.</b>  |           |
| V. J. Lowe, <i>Officer-in-Charge.</i>   | 1         |
| <b>British Columbia</b>   |           |
| <b>EXPERIMENTAL STATION, Summerland.</b>  |           |
| R. C. Palmer, B.S.A., M.S.A., D.Sc., <i>Superintendent.</i>                                     | 1         |
| F. E. Atkinson, B.S.A., <i>Food Technologist : fruit and vegetable products.</i>                | 30        |
| A. J. Mann, B.S.A., <i>Horticulturist : fruit breeding and root stocks.</i>                     | 4, 9      |
| J. C. Wilcox, B.S.A., M.S.A., Ph.D., <i>Horticulturist : orchard nutrition, irrigation.</i>     | 2, 9      |
| C. C. Strachan, B.S.A., M.S.A., Ph.D., <i>Food Technologist : fruit and vegetable products.</i> | 30        |
| D. V. Fisher, B.S.A., M.S.A., Ph.D., <i>Horticulturist : fruit harvesting and storage.</i>      | 9, 30     |
| C. A. Hornby, B.S.A., M.S.A., Ph.D., <i>Horticulturist : vegetable breeding and nutrition.</i>  | 2, 4, 9   |
| J. L. Mason, B.S.A., <i>Horticulturist : orchard nutrition, irrigation.</i>                     | 2, 9      |



## CANADA

|   |                  |
|---|------------------|
| S. W. Porritt, B.S.A., <i>Horticulturist</i> : fruit harvesting and storage   | Subject<br>9, 30 |
| J. E. Miltimore, B.S.A., <i>Agronomist</i> : forage crops and dairy cattle.   | 8, 17            |
| A. W. Moyls, B.S.A., <i>Food Technologist</i> : fruit and vegetable products. | 30               |

### EXPERIMENTAL FARM, Agassiz.

|   |               |
|---|---------------|
| W. H. Hicks, B.S.A., <i>Superintendent</i> .                          | 1, 14, 15, 17 |
| M. F. Clarke, B.S.A., M.S.A., <i>Assistant</i> : agronomy.            | 4, 7, 8, 28   |
| T. H. Anstey, B.S.A., M.S.A., Ph.D., <i>Assistant</i> : horticulture. | 4, 9          |
| D. K. Taylor, B.S.A., M.Sc., <i>Assistant</i> : cereals.              | 4, 7          |
| R. M. Hall, B.S.A., <i>Supervisor of Illustration Stations</i> .      | 7, 27         |
| B. A. Dickson, B.S.A., M.S.A., <i>Soils Specialist</i> .              | 2             |

### EXPERIMENTAL STATION, Saanichton

|   |    |
|---|----|
| J. J. Woods, B.S.A., M.S.A., <i>Superintendent</i> .                        | 1  |
| H. J. Kemp, B.S.A., <i>Assistant</i> : engineering.                         | 28 |
| E. R. Hall, B.S.A., <i>Assistant</i> : horticulture ; fruits.               | 9  |
| J. H. Crossley, B.S.A., M.S.A., <i>Assistant</i> : horticulture, bulbs.     | 9  |
| R. M. Adamson, B.A., N.Sc., M.Sc., <i>Assistant</i> : vegetables and seeds. | 9  |
| R. H. Turley, B.S.A., <i>Assistant</i> : fodder plants.                     | 8  |
| G. R. Webster, B.S.A., <i>Assistant</i> : soils and plant nutrition.        | 2  |

### RANGE EXPERIMENT STATION, Kamloops, B.C.

|  |      |
|--|------|
| T. G. Willis, B.S.A., M.S.A., <i>Officer in Charge</i> . | 1, 8 |
| A. McLean, B.S.A., M.Sc.                                 | 8    |
| M. A. MacDonald, B.S.A., M.S.A.                          | 8    |

### EXPERIMENT STATION, Prince George.

|   |      |
|---|------|
| F. V. Hutton, B.S.A., <i>Superintendent</i> . | 1, 4 |
| J. R. Barry, B.S.A.                           | 9    |
| A. C. Wilton, B.S.A.                          | 8    |

### EXPERIMENTAL SUB-STATION, Smithers, B.C.

|   |             |
|---|-------------|
| W. T. Burns, B.S.A., M.Sc., <i>Superintendent</i> . | 1           |
| J. V. Zacharias, B.S.A.                             | 2, 7, 8, 12 |

### EXPERIMENTAL SUB-STATION, Whitehorse, Y.T.

|  |   |
|--|---|
| J. W. Abbott, <i>Officer in Charge</i> . | 1 |
|--|---|

### EXPERIMENTAL SUB-STATION, Fort Simpson, N.W.T.

|   |   |
|---|---|
| J. A. Gilbey, B.S.A., M.Sc., <i>Officer in Charge</i> . | 1 |
|---|---|

## DEPARTMENT OF RESOURCES AND DEVELOPMENT

### ADMINISTRATIVE

|   |   |
|---|---|
| H. L. Keenleyside, M.A., Ph.D., LL.D., <i>Deputy Minister</i> . | 1 |
|---|---|

### FORESTRY BRANCH

Ottawa, Ontario.

|   |   |
|---|---|
| D. A. Macdonald, B.Sc.F., <i>Director</i> . | 1 |
|---|---|

## FOREST ECONOMICS SECTION

Allon Peebles, B.A., Ph.D., *Chief*.

27

A. L. Best, B.Sc.F.

27

G. C. Wilkes, B.Sc.F.

27

## Forest Research Division

G. Tunstell, B.Sc.F., *Chief*

1

## SILVICULTURAL SECTION

A. Bickerstaff, B.Sc.F., *Head*.

10

J. L. Farrar, B.Sc.F., M.F.

10

G. C. Cunningham, B.Sc..F

10

L. A. Smithers, B.Sc.F., M.Sc.F.

10

K. T. Logan, B.Sc.F.

10

J. W. Fraser, B.Sc.F.

10

D. R. Hemming, B.Sc.F.

10

E. G. Daly, B.Sc.F.

10

## FOREST MANAGEMENT SECTION

R. H. Candy, B.A., *Head*.

10

G. H. D. Bedell, B.Sc.F.

10

D. W. MacLean, B.Sc.F.

10

## INVENTORIES SECTION

H. E. Seely, B.Sc.F., *Head*.

10

J. M. Robinson, M.B.E., B.Sc.F.

10

A. J. W. Nash, B.A., B.Sc.F.

10

F. D. MacAndrews, B.Sc.F.

10

W. H. Hilborn, B.Sc.F.

10

} aerial surveys.

## District Offices

## MARITIMES : Post Office Buildings, Fredericton, N.B.

J. C. Veness, B.Sc.F., *District Forest Officer*.

10

D. E. Nickerson, B.Sc.F., M.Sc.

10

I. C. M. Place, B.Sc.F., M.F.

10

J. W. McLeod, B.Sc.F.

10

W. H. Drinkwater, B.Sc.F.

10

M. G. Bowen, B.Sc.F.

10

C. C. Thomson, B.Sc.F.

10

A. B. Berry, B.Sc.F.

10

A. B. Vincent, B.Sc.F.

10

## QUEBEC : Valcartiere Forest Experiment Station, Loretteville, P.Q.

R. G. Ray, B.A., B.Sc.F., *District Forest Officer*.

10

Andre Linteau, B.A., B.Ar., F.E., M.F., Ph.D.

10

J. C. Boynton, B.Sc.F.

10

## ONTARIO : Petawawa Forest Experiment Station, Chalk River, Ont.

H. D. Heaney, B.Sc.F., *Superintendent*.

10

E. S. Atkins, B.Sc.F.

10

## MANITOBA-SASKATCHEWAN : Federal Bldg., Winnipeg, Man.

|  |    |
|--|----|
| V. H. Phelps, B.Sc.F., Phm.B., <i>District Forest Officer.</i> | 10 |
| J. S. Rowe, B.Sc., M.Sc.                                       | 10 |
| G. M. Wilson, B.Sc.F.  | 10 |
| M. Kastrukoff, B.Sc.F.   | 10 |
| R. T. Pike, B.Sc.F.  | 10 |

## ALBERTA : 701 Public Bldg., Calgary, Alta.

|   |    |
|---|----|
| J. L. McLenahan, B.Sc.F., <i>District Forest Officer.</i> | 10 |
| D. I. Crossley, B.Sc.F.                                   | 10 |
| H. A. Parker, B.A., B.Sc.F.                               | 10 |
| W. K. MacLeod, B.A., B.S.F.                               | 10 |
| A. W. Blyth, B.Sc.F.                                      | 10 |
| J. Quaite, B.A., B.S.F.                                   | 10 |

**Forestry Operation Division**

|                                       |    |
|---------------------------------------|----|
| H. W. Beall, B.Sc.F., <i>A/Chief.</i> | 10 |
| J. C. Macleod, B.Sc.F.                | 10 |
| J. A. Doyle, B.Sc.F.                  | 10 |
| R. W. Chorlton, B.Sc.F.               | 10 |

} forest fire.

**Forest Products Division**

|  |   |
|--|---|
| J. H. Jenkins, B.A.Sc., O.B.E., <i>Head.</i> | 1 |
|--|---|

**Ottawa Laboratory**

Superintendent—Vacant.

## TIMBER MECHANICS SECTION

|  |    |
|--|----|
| W. E. Wakefield, <i>Head</i> : timber mechanics. | 11 |
| D. C. Miller, B.Sc. : veneers and plywoods.      | 11 |
| W. Butterworth, B.Sc. : containers.              | 11 |
| R. W. K. Peterson, B.Sc. : dielectric heating.   | 11 |
| D. E. Kennedy, B.A.Sc. : timber engineering.     | 11 |
| Miss E. I. Kennedy : timber engineering.         | 11 |
| J. W. Rudnicki, B.Sc. : engineering.             | 11 |

## WOOD PRESERVATION AND PATHOLOGY SECTION

|  |    |
|--|----|
| C. Greaves, M.Sc., Ph.D., <i>Head</i> : wood preservation. | 11 |
| H. P. Sedziak, M.S. : wood preservation chemistry.         | 11 |
| M. J. Colleary : wood preservation.                        | 11 |
| J. Krzyzewski, B.Sc., <i>Chemist.</i>                      | 11 |

## PAINTS AND COATINGS UNIT

|                                      |    |
|--------------------------------------|----|
| R. C. Hubbard : paints and coatings. | 11 |
|--------------------------------------|----|

## PATHOLOGY UNIT

|  |    |
|--|----|
| Miss C. W. Fritz, Ph.D., B.A., M.Sc. : timber pathology. | 11 |
| E. A. Atwell, B.S.A., M.Sc.                              | 11 |

## WOOD CHEMISTRY SECTION

|                                  |    |
|----------------------------------|----|
| H. Schwartz, Ph.D., <i>Head.</i> | 11 |
| F. W. King, B.A.                 | 11 |
| F. Bender.                       | 11 |
| L. P. Clermont, B.A.Sc.          | 11 |

} wood as raw material.



## CANADA

|   | Subject     |
|---|-------------|
| WOOD UTILIZATION SECTION                              |             |
| K. G. Fensom, B.A., B.Sc.F., <i>Chief</i> .           | 11          |
| LOGGING AND MILLING UNIT                              |             |
| J. B. Prince, M.Sc.F., : secondary industries.        | 11          |
| G. E. Bell, B.Sc.F. : milling.                        | 11          |
| A. W. B. Benson, B.Sc.F. : logging.                   | 11          |
| WOOD TECHNOLOGY UNIT.                                 |             |
| J. D. Hale, M.A.                                      | 11          |
| D. C. McIntosh, M.A.                                  | 11          |
| LUMBER SEASONING UNIT                                 |             |
| R. S. Millett, B.Sc.                                  | 11          |
| A. G. Glennie, B.Sc.F.                                | 11          |
|   | }seasoning. |
| <b>Vancouver Laboratory</b>                           |             |
| University of British Columbia.                       |             |
| R. M. Brown, B.Sc.F., M.B.E., <i>Superintendent</i> . | 1           |
| ADMINISTRATION SECTION                                |             |
| R. S. Perry, C.E.                                     | 11          |
| TIMBER MECHANICS SECTION                              |             |
| J. B. Alexander, M.Sc., <i>Head</i> .                 | 11          |
| P. L. Northcott, B.A.Sc. : plywoods.                  | 11          |
| W. J. Smith, B.A.Sc. : timber engineering.            | 11          |
| WOOD CHEMISTRY SECTION                                |             |
| J. A. F. Gardner, M.A., Ph.D.                         | 11          |
| H. MacLean, B.A., M.A.                                | 11          |
| G. M. Barton, M.A.                                    | 11          |
|   | }Chemists.  |
| WOOD UTILIZATION SECTION                              |             |
| F. W. Guernsey, B.A.Sc. (F.), <i>Head</i> .           | 11          |
| C. F. McBride, B.A.Sc., : milling.                    | 11          |
| C. F. Archer, B.Sc.F. : seasoning.                    | 11          |
| G. R. W. Nixon, B.A.Sc. : logging.                    | 11          |
| K. W. Rymer, B.Sc.F. : seasoning.                     | 11          |
| WOOD PRESERVATION AND PATHOLOGY SECTION               |             |
| W. M. Conners, B.A.Sc., <i>Head</i> .                 | 11          |
| H. W. Eades, B.Sc.F., : pathology.                    | 11          |
| W. C. Fountain, B.Sc.F. : pathology.                  | 11          |
| J. W. Roff, B.Com. B.S.F. : preservation.             | 11          |
| G. Bramhall, B.A.Sc. : preservation.                  | 11          |

## NATIONAL RESEARCH LABORATORIES

Ottawa.

- C. J. Mackenzie, C.M.G., M.C., M.C.E., D.Sc., LL.D., D.Eng.,  
F.R.S.C., F.R.S., *President*. 1

## Division of Applied Biology

- W. H. Cook, O.B.E., B.Sc., M.Sc., Ph.D., LL.D., F.R.S.C., *Director*. 1  
G. A. Ledingham, M.B.E., B.Sc., M.Sc., Ph.D., F.R.S.C., *Assistant  
Director* : industrial fermentations. 1  
G. A. Adams, B.A., M.Sc., Ph.D., *Biochemist* : carbohydrates and  
cellulose. 24  
A. C. Blackwood, B.Sc., M.Sc., Ph.D., *Bacteriologist* : industrial  
fermentations. 22  
K. A. Clendenning, B.A., M.A., Ph.D., *Biochemist* : photosynthesis 5  
N. E. Gibbons, M.B.E., B.A., M.A., Ph.D., *Bacteriologist* : bacon  
curing and egg preservation. 22  
P. R. Gorham, B.A., M.S., Ph.D., *Plant Physiologist* : photo-  
synthesis. 5  
N. H. Grace, M.B.E., B.A., M.A., Ph.D., F.R.S.C., *Biochemist* :  
fats and oils. 24  
G. W. Harmsen, B.Sc., M.Sc., Ph.D., *Microbiologist* : cellulose and  
industrial fermentations. 22  
J. S. Hart, B.A., M.A., Ph.D., *Animal Physiologist* : environmental  
relations. 13  
R. H. Haskins, B.A., M.A., Ph.D., *Mycologist* : industrial fer-  
mentations. 20  
J. W. Hopkins, M.B.E., B.Sc., M.Sc., Ph.D., *Statistician* : bio-  
metry and design of experiments. 29  
R. V. Lemieux, B.A., Ph.D., *Organic Chemist* : carbohydrates. 24  
J. B. Marshall, B.S.A., M.A., Ph.D., *Plant Physiologist* : utiliza-  
tion of agricultural products. 3  
A. C. Neish, B.Sc. (Agr.), M.Sc., Ph.D., *Biochemist* : industrial.  
fermentations. 24  
J. A. Pearce, B.A., M.A., Ph.D., *Chemist* : dairy products. 24  
D. Rose, B.Sc. (Agr.), M.Sc., Ph.D., *Biochemist* : muscle studies. 25  
H. R. Sallans, B.Sc., M.Sc., Ph.D., *Biochemist* : oil seeds. 25  
R. W. Watson, B.A., M.A., Ph.D., *Chemist* : industrial fermenta-  
tions. 24  
J. A. Wheat, B.E., *Chemical Engineer* : plant design ; industrial  
fermentations. 25

## Division of Chemistry

- E. W. R. Steacie, O.B.E., M.Sc., Ph.D., D.Sc., F.R.S.C., F.R.S.,  
*Director*. 1  
A. Cambron, O.B.E., M.Sc., Ph.D., F.R.S.C., *Assistant Director*. 1  
C. H. Bayley, M.B.E., M.A.Sc., M.A., F.C.I.C., F.T.I., *Chemist* :  
textile research, including rot proofing 24  
C. Y. Hopkins, M.A., Ph.D., *Chemist* : seed oils. 24

## CANADA

|  | Subject |
|--|---------|
| P. Larose, M.B.E., M.Sc., Ph.D., F.T.I., <i>Chemist</i> : textile fibres.                        | 24      |
| L. Marion, M.B.E., M.Sc., Ph.D., F.R.S.C., <i>Chemist</i> : chemical study of plants, alkaloids. | 24      |
| I. E. Puddington, M.Sc., Ph.D., F.R.S.C., <i>Chemist</i> : potato products.                      | 24      |
| S. Kirkwood, Ph.D., <i>Chemist</i> : chemical study of alkaloids.                                | 24      |
| O. E. Edwards, Ph.D., <i>Chemist</i> : chemical study of alkaloids.                              | 24      |

### Production Service

#### PLANT PRODUCTS DIVISION

|   |        |
|---|--------|
| C. W. Leggatt, B.S.A., M.Sc., Ph.D., <i>Agricultural Scientist</i> , Gr. 4 : seed research.         | 3, 12  |
| W. H. Wright, B.S.A., M.A., F.A.I.C., <i>Chief Laboratory Services</i> : seed research.             | 3, 12  |
| B. B. Migicovsky, B.S.A., M.Sc., Ph.D., <i>Agricultural Scientist</i> , Grade 4 : vitamin research. | 15, 25 |
| Miss A. W. Anderson, B.A., <i>Agricultural Scientist</i> , Grade 2 : seed research.                 | 3, 12  |

### Marketing Service

#### ADMINISTRATIVE DIVISION

|   |   |
|---|---|
| A. M. Shaw, C.M.G., B.S.A., <i>Director</i> . | 8 |
|---|---|

#### ECONOMICS DIVISION

|  |    |
|--|----|
| J. F. Booth, O.B.E., B.S.A., M.S., Ph.D., LL.D., <i>Associate Director</i> , in charge of <i>Economics</i> . | 27 |
| J. Coke, B.S.A., M.S., <i>Principal Economist</i> : co-ordinator of research projects.                       | 27 |

#### AGRICULTURAL POLICY AND PRICES

|   |    |
|---|----|
| A. E. Richards, B.S.A., M.A., Ph.D., <i>Principal Economist</i> : foreign and domestic policies.    | 27 |
| J. N. Lewis, B.A., M.A., <i>Senior Economist</i> : foreign agricultural policies.                   | 27 |
| F. Shefrin, B.S.A., M.Sc., <i>Economist</i> : domestic agricultural policies.                       | 27 |
| E. Jaska, Dr. Agr., <i>Associate Economist</i> : foreign agricultural policies.                     | 27 |
| F. Lawrence, B.A., M.A., <i>Associate Economist</i> : foreign agricultural policies.                | 27 |
| F. M. Schrader, B.S.A., M.Sc., <i>Economist</i> : statistical analyses and prices of farm products. | 27 |

#### PRODUCTION ECONOMICS

|   |    |
|---|----|
| S. C. Hudson, B.S.A., M.S., Ph.D., <i>Principal Economist</i> : research in production economics and farm management. | 27 |
| A. Gosselin, B.A., B.S.A., <i>Senior Economist</i> : farm management.   | 27 |
| G. P. Boucher, B.S.A., M.S., <i>Economist</i> : farm management.  | 27 |
| R. Choquette, B.A., B.S.A., Ph.D., <i>Assistant Economist</i> : farm management.                                      | 27 |
| J. A. Dawson, B.S.A., M.S., <i>Assistant Economist</i> : farm accounting.   | 27 |



## MARKETING AND CO-OPERATION

- A. H. Turner, B.Com., M.S., *Senior Economist* : research in marketing and co-operative studies. 27
- E. P. Reid, B.A., M.A., *Senior Economist* : transportation economics. 27
- J. M. Gray, B.S.A., M.S.A., *Assistant Economist* : research in marketing of fruit and vegetables. 27
- M. Rachlis, B.S.A., M.S., *Assistant Economist* : research in marketing of dairy products 27
- J. E. O'Meara, B.A., M.A., *Economist* : research in agricultural co-operatives. 27
- Miss C. I. Johnston, B.A., M.A., *Assistant Economist* : research in rural food habits. 27

## RURAL SOCIOLOGY

- Miss M. A. MacNaughton, B.H.Sc., M.A., *Assistant Economist* : research in level of living of rural families. 27

*Regional Offices :*

- C. C. Spence, B.S.A., Ph.D., *Senior Economist* : Western Supervisor of land utilization and farm management studies. 27

## Vancouver :

- E. D. Woodward, B.S.A., M.S.A., *Associate Economist* : research in farm management. 27
- H. W. Trevor, B.S.A., M.S.A., *Associate Economist* : research in farm management. 27

## Edmonton :

- S. Mysak, B.S.A., M.Sc., *Economist* : research in land utilization. 27
- T. Askin, B.S.A., *Assistant Economist* : research in farm management. 27

## Saskatoon :

- R. A. Stutt, B.S.A., M.Sc., *Economist* : research in land utilization. 27
- M. E. Andal, B.S.A., M.Sc., *Assistant Economist* : research in farm management. 27
- G. Haase, B.S.A., M.Sc., *Assistant Economist* : research in land utilization. 27

## Winnipeg :

- T. O. Riecken, B.S.A., *Associate Economist* : research in farm management. 27

## Truro :

- G. C. Retson, B.A., *Associate Economist* : research in farm management. 27

## NOVA SCOTIA AGRICULTURAL COLLEGE, Truro, N.S.

- V. A. Heighton, B.Sc. (Agr.). 27

## DEPARTMENT OF TRADE AND COMMERCE

## Board of Grain Commissioners, Grain Research Laboratory

Winnipeg.

|   |       |
|---|-------|
| J. A. Anderson, M.Sc., Ph.D., F.R.S.C., <i>Chief Chemist.</i>                         | 5, 25 |
| I. Hlynka, M.Sc., Ph.D., <i>Biochemist</i> : bread wheat research.                    | 5, 25 |
| T. R. Aitken, <i>Cereal Chemist</i> : annual quality studies.                         | 5, 25 |
| W. O. S. Meredith, B.S.A., M.Sc., Ph.D., <i>Biochemist</i> : malting barley research. | 5, 25 |
| A. E. Paull, B.A., Ph.D., <i>Statistician</i> : experimental methods.                 | 29    |
| G. N. Irvine, B.Sc., Ph.D., <i>Physical Chemist</i> : durum wheat research.           | 5, 25 |
| D. K. Cunningham, B.A., <i>Biochemist</i> : analytical research.                      | 5, 25 |
| I. Levi, B.Sc., <i>Cereal Chemist</i> : analyses.                                     | 5, 25 |
| C. J. Dempster, B.Sc., <i>Physical Chemist</i> : bread wheat.                         | 5, 25 |
| E. J. Bass, B.Sc., <i>Biochemist</i> : malting barley.                                | 5, 25 |

## Bureau of Statistics

Ottawa.

|  |        |
|--|--------|
| Herbert Marshall, O.B.E., B.A., F.R.S.C., <i>Statistician.</i> | 27, 29 |
|--|--------|

## Agriculture Division

|   |        |
|---|--------|
| C. V. Parker, B.S.A., M.A., <i>Director.</i>  | 27, 29 |
| W. D. Porter, B.Com., M.A., <i>Statistician</i> : crop estimation ; grain marketing.                | 27, 29 |
| W. F. Ewert, B.S.A., M.Sc., <i>Statistician</i> : live stock estimates ; meat and wool production   | 27, 29 |
| A. D. Holmes, B.A., <i>Statistician</i> : research in statistical methods ; crop-weather relations. | 27, 29 |
| R. E. Johnson, B.S.A., M.Sc., <i>Statistician</i> : fruits and vegetables ; special crop estimates. | 9, 29  |
| J. K. Finlayson, B.S.A., <i>Statistician</i> : poultry and fur estimates.                           | 27, 29 |
| P. H. Ferguson, B.S.A., M.Sc., <i>Statistician</i> : dairy products estimates.                      | 27, 29 |
| D. G. Campbell, B.A., <i>Statistician</i> : field crop estimates.                                   | 27, 29 |
| H. E. Comer, B.Sc., <i>Statistician</i> : research statistical methods.                             | 29     |
| J. W. Channon, B.S.A., <i>Statistician</i> : live stock estimates.                                  | 27, 29 |
| J. H. Grisdale, B.S.A., <i>Statistician</i> : field crop estimates.                                 | 27, 29 |
| W. G. Morris, B.A., <i>Statistician</i> : farm finance estimates.                                   | 27, 29 |

## Census Demography Division

|  |    |
|--|----|
| O. A. Lemieux, M.B.E., M.S.A., Ph.D., <i>Director.</i>               | 29 |
| J. L. Forsyth, M.Sc., <i>Chief, Agricultural Census.</i>             | 29 |
| R. S. Ellis, B.Sc., <i>Assistant Chief, Agricultural Census.</i>     | 29 |
| J. A. Arsenault, B.Sc., <i>Assistant Chief, Agricultural Census.</i> | 29 |

## Forestry Section

|                              |    |
|------------------------------|----|
| L. J. Pouliot, <i>Chief.</i> | 29 |
|------------------------------|----|

**PROVINCES OF CANADA**  
**PROVINCIAL FOREST SERVICES**  
**BRITISH COLUMBIA**

**Department of Lands and Forests**

|  | Subject |
|--|---------|
| C. D. Orchard, B.Sc.F., M.Sc.F., D.Sc., <i>Deputy Minister and Chief Forester.</i>         | 1       |
| R. C. St. Clair, B.S. (C.E.), M.S.F., <i>Assistant Chief Forester.</i>                     | 1       |
| E. B. Prowd, B.Sc.F., <i>Forester</i> : management administration.                         | 1       |
| S. E. Marling, B.S.F., <i>Forester</i> : management administration.                        | 1       |
| R. C. Telford, B.Sc., <i>Assistant Forester</i> : management working plans.                | 10      |
| G. M. Abernethy, B.A.Sc., <i>Assistant Forester</i> : management appraisals.               | 10      |
| F. S. McKinnon, B.Sc.F., M.F., <i>Forester</i> : Economics (Forest).                       | 27      |
| J. L. Alexander, B.Sc.F., <i>Forester</i> : mensuration studies.                           | 10      |
| R. H. Spilsbury, B.S.A., <i>Forester</i> : soils—site classification.                      | 2       |
| E. H. Garman, B.Sc.F., M.F., <i>Assistant Forester</i> : silvicultural studies.            | 10      |
| H. M. Pogue, B.A.Sc., <i>Assistant Forester</i> : forest surveys.                          | 10      |
| G. C. Warrack, B.Sc.F., <i>Assistant Forester</i> : silvicultural studies.                 | 10      |
| A. L. Orr-Ewing, B.Sc.F., <i>Assistant Forester</i> : rodent studies.                      | 15      |
| R. G. McKee, B.A.Sc., <i>Forester</i> : forest protection—fires, insects, disease.         | 1       |
| D. W. Perrie, B.Sc., <i>Meteorologist</i> : weather.                                       | 26      |
| H. G. McWilliams, B.A.Sc., <i>Forester</i> : reforestation.                                | 1       |
| E. G. Oldham, B.Sc.F., <i>Forester</i> : parks and recreation.                             | 1       |
| R. D. Greggor, B.A.Sc., <i>Forester</i> : Ranger School.                                   | 1       |
| W. C. Pendray, B.S.A., <i>Agrologist</i> : stock grazing.                                  | 8       |
| L. S. Hope, B.Sc.F., <i>Silviculturist</i> : Nelson District.                              | 10      |
| C. D. Grove-White, B.S.F., <i>Silviculturist</i> : Kamloops District.                      | 10      |
| L. A. de Grace, B.A., B.S.F., M.F., <i>Silviculturist</i> , Aleza Lake Experiment Station. | 10      |

**ONTARIO****Department of Lands and Forests**

|  |                              |    |
|--|------------------------------|----|
| Parliament Buildings, Toronto. Tel. : Adelaide 1211.           |                              |    |
| F. A. MacDougall, B.Sc.F., <i>Deputy Minister.</i>             |                              | 1  |
| G. E. Ponsford : air service.                                  |                              | 30 |
| T. E. Mackey, B.Sc.F. : forest protection.                     |                              | 1  |
| E. J. Zavitz, B.Sc.F. : reforestation.                         |                              | 1  |
| R. N. Johnston, B.Sc.F. : research.                            |                              | 1  |
| F. W. Beatty, D.L.S., C.E. : surveys and engineering.          |                              | 28 |
| J. F. Sharpe, B.Sc.F. : timber management.                     |                              | 1  |
| W. J. K. Harkness, D.Sc., M.A., B.A. : fisheries and wildlife. |                              | 1  |
| W. D. Cram, B.Sc.F. : land and recreation areas.               |                              | 1  |
| K. Acheson, B.Sc.F.  | } <i>Regional Foresters.</i> | 1  |
| P. Addison, B.Sc.F.  |                              |    |
| A. S. Bray, B.Sc.F.  |                              |    |
| E. L. Ward, B.Sc.F.  |                              |    |
| F. S. Newman, B.Sc.F.  |                              |    |



## CANADA

Subject

|                              |   |    |
|------------------------------|---|----|
| M. Adamson, B.Sc.F.          | } <i>Forest Station Superintendents.</i>                | 1  |
| G. M. Linton, B.Sc.F.        |   |    |
| R. S. Carman, B.Sc.F.,       | <i>Superintendent of Seed Extracting Plant.</i>         | 1  |
| P. McEwen, B.Sc.F.,          | <i>Director, Ontario Forest Ranger School.</i>          | 1  |
| G. A. Hills, M.S.A., B.S.A., | <i>Chief Soil Specialist.</i>                           | 2  |
| J. A. Brodie, B.Sc.F.,       | <i>Officer-in-Charge of Forest Resources Inventory.</i> | 10 |

## QUEBEC

### Department of Lands and Forests

|                                   |                         |   |
|-----------------------------------|-------------------------|---|
| Avila Bédard, M.A., M.F., I.S.O., | <i>Deputy-Minister.</i> | 1 |
|-----------------------------------|-------------------------|---|

#### FOREST PROTECTION SERVICE

|                                    |  |    |
|------------------------------------|--|----|
| H. Kieffer, F.E.,                  | <i>Director.</i>                       | 1  |
| G. H. Bernier, F.E.,               | <i>Assistant.</i>                      | 1  |
| G. O. Villeneuve, F.E., Ph.D.,     | <i>Chief of Meteorological Bureau.</i> | 26 |
| L. Daviault, B.S.A., M.Sc., D.Sc., | <i>Chief of Entomological Bureau.</i>  | 19 |

#### FOREST SERVICE

|                              |   |    |
|------------------------------|---|----|
| R. Deschamps, F.E.,          | <i>Director.</i>  | 1  |
| R. Bellefeuille,             | <i>Chief of the Forest Economy Bureau.</i>              | 10 |
| L. de G. Dubois, F.E.,       | <i>Chief of the Minor Industries Bureau.</i>            | 11 |
| R. Pomerleau, B.S.A., D.Sc., | <i>Chief of the Pathology Bureau.</i>                   | 6  |
| R. Delisle, F.E.,            | <i>Director of Forest Extension Bureau.</i>             | 10 |
| R. Valin, F.E.,              | <i>Chief of the Forest Products Bureau (Statistics)</i> | 29 |
| J. R. A. Legendre,           | <i>Chief of Wood Bureau (Montreal).</i>                 | 11 |
| J. Risi, D.Sc.,              | <i>Chief of Forest Products Laboratory (Duchesnay)</i>  | 11 |

## ALBERTA

### Department of Lands and Forests

|                                       |   |           |
|---------------------------------------|---|-----------|
| John Harvie,                          | <i>Deputy Minister.</i>   | 1, 10, 11 |
| E. S. Huestis,                        | <i>Director of Forestry.</i>  | 1, 10, 11 |
| J. P. Alexander, B.Sc.F., O.B.E.,     | <i>Snr. Supt., Eastern Rockies Forest Service, New Telephone Building, Calgary.</i>         | 10, 11    |
| F. G. Edgar, B.Sc.F.,                 | <i>Supt., Bow River Forest Reserve, 128—7th Ave. West, Calgary.</i>                         | 10, 11    |
| J. R. H. Hall,                        | <i>Supt., Clearwater Forest Reserve, Rocky Mountain House, Alberta.</i>                     | 10, 11    |
| Donald Buck,                          | <i>Supt., Brazeau-Athabaska Forest Reserve, Edson, Alberta.</i>                             | 10, 11    |
| V. A. Wood, B.Sc.Agric., M.Sc.Agric., | <i>Director of Lands.</i>   | 2, 8      |
| J. A. Campbell, B.Sc., M.Sc.Agric.,   | <i>Grazing Appraiser, Edmonton.</i>   | 8         |
| A. D. Paul, B.Sc.Agric.,              | <i>Soil Classifier, Administration Building, Edmonton.</i>                                  | 2         |
| W. P. Coad, B.Sc.Agric.,              | <i>Soil Examiner, Administration Building, Edmonton.</i>                                    | 2         |
| E. S. Fellows, M.Sc.F.,               | <i>Chief Forester, Eastern Rockies Forest Conservation Board, Public Building, Calgary.</i> | 10, 11    |
| W. R. Hanson, B.Sc.Agr., M.Sc.,       | <i>Grazing Appraiser.</i>   | 8         |

## SASKATCHEWAN

## Department of Natural Resources and Industrial Development

|   |    |
|---|----|
| C. A. L. Hogg, <i>Deputy Minister</i> .   | 1  |
| E. J. Marshall, <i>Director of Forests</i> .  | 1  |
| C. R. Christie, B.Sc.F., <i>Senior Forester</i> .                                       | 1  |
| B. A. Matheson, <i>District Superintendent</i> .  | 1  |
| F. Warburton, <i>District Superintendent</i> .  | 1  |
| A. Hansen, <i>District Superintendent</i> .   | 1  |
| C. L. McLean, <i>Northern Administrator</i> .   | 1  |
| W. T. Ritchie, <i>Director of Parks and Lands</i> .                                     | 1  |
| O. G. Horncastle, <i>Forester</i> .   | 10 |
| W. A. McNeill, B.Sc.F., <i>Forester</i> .   | 10 |
| H. G. Pond, B.Sc.F., <i>Forester</i> .  | 10 |
| H. P. Eisler, B.Sc.F., <i>Forester</i> .  | 10 |
| F. H. Hewett, B.Sc.F., <i>Forester</i> .  | 10 |
| A. O. Aschim, <i>Forester</i> .   | 10 |
| J. M. Atkinson, B.Sc.F., <i>Forester</i> .  | 10 |
| R. V. Brittain, B.Sc.F., <i>Forester</i> .  | 10 |
| M. A. Laird, B.Sc.F., <i>Forester</i> .   | 10 |
| M. N. Palley, A.B., B.Sc.F., M.F., <i>Forester</i> .                                    | 10 |
| I. Kagis, F.E. (Forestry Branch Agricultural Academy of Latvia),<br><i>Forester</i> .   | 10 |
| A. Kabzems, F.E. (Forestry Branch Agricultural Academy of<br>Latvia), <i>Forester</i> . | 10 |
| W. D. Smith, B.A.Sc., <i>Research Engineer</i> .  | 11 |
| R. F. Arnold, <i>Statistician</i> .   | 29 |

## NOVA SCOTIA

## Department of Lands and Forests

|  |       |
|--|-------|
| G. W. I. Creighton, B.A., B.Sc.F., <i>Deputy Minister</i> .                            | 1     |
| E. L. Boulter, B.Sc.F., <i>Assistant Provincial Forester</i> .                         | 1, 10 |
| D. A. Benson, B.A., <i>Wildlife Biologist</i> : management of game and<br>fur-bearers. | 18    |
| K. N. H. Greenidge, B.Sc.F., M.F., <i>Forest Biologist</i> .                           | 3, 10 |
| L. S. Hawboldt, B.Sc. (Agr.), M.Sc., <i>Forest Entomologist</i> .                      | 1     |

## MANITOBA

## Department of Mines and Natural Resources

|   |    |
|---|----|
| D. M. Stephens, <i>Deputy Minister</i> .                          | 1  |
| J. G. Somers, <i>Provincial Forester</i> .                        | 1  |
| R. Harvey, <i>District Forester</i> .                             | 1  |
| E. A. Koons, <i>District Forester</i> .                           | 1  |
| T. B. Vernilyea, <i>District Forester</i> .                       | 1  |
| A. W. Braine, B.Sc.F., <i>District Forester</i> .                 | 1  |
| S. W. Schortinghuis, B.Sc.F., <i>Chief of Forest Protection</i> . | 1  |
| C. B. Gill, B.Sc.F., <i>Chief of Forest Management</i> .          | 10 |

## NEW BRUNSWICK

## Department of Lands and Mines

|   |   |
|---|---|
| G. H. Prince, D.Sc., I.S.O., <i>Deputy Minister.</i>      | 1 |
| G. L. Miller, C.E., D.L.S., M.Sc., <i>Chief Forester.</i> | 1 |
| K. B. Brown, B.Sc., <i>Director of Photogrammetry.</i>    | 1 |

## UNIVERSITIES

## McGILL UNIVERSITY

## Faculty of Agriculture

|  |       |
|--|-------|
| Macdonald College, P.Q.  |       |
| W. H. Brittain, M.S. in Agr., Ph.D., D.Sc., F.R.S.C., <i>Vice-Principal, Macdonald College; Dean, Faculty of Agriculture; Professor of Entomology: economic insects, especially fruit insects; insect biology.</i> | 1, 19 |
| L. G. Heimpel, M.S., <i>Associate Professor and Chairman of the Department of Agricultural Engineering: crop processing machinery.</i>   | 28    |
| J. H. Cooper, B.Sc. (Agr.), <i>Assistant Professor of Agricultural Engineering: crop processing machinery.</i>   | 28    |
| L. C. Raymond, M.S., <i>Professor of Agronomy: corn and roots investigations and breeding; pasture investigations.</i>   | 4, 8  |
| E. A. Lods, M.S.A., <i>Associate Professor of Agronomy: agronomy; cereal investigations and breeding.</i>  | 4     |
| H. A. Steppler, B.Sc.A., M.Sc., <i>Assistant Professor of Agronomy: forage breeding.</i>   | 4     |
| A. R. Ness, B.S.A., <i>Professor and Chairman of the Department of Animal Husbandry: animal production and breeding.</i>   | 14    |
| L. H. Hamilton, M.S., <i>Associate Professor of Animal Husbandry: sheep and wool production and beef production.</i>   | 18    |
| P. H. H. Gray, M.A., D.Sc., <i>Associate Professor and Chairman of the Department of Bacteriology: soil microbiology.</i>  | 2     |
| F. S. Thatcher, Ph.D., <i>Assistant Professor of Bacteriology: physiology of micro-organisms; mode of action of antibiotics; food microbiology.</i>  | 2     |
| W. A. DeLong, B.S.A., M.Sc., Ph.D., F.C.I.C., <i>Associate Professor of Chemistry: plant biochemistry (respiration, mineral metabolism); soil chemistry.</i>   | 2     |
| D. G. Chapman, B.S.A., M.Sc., <i>Demonstrator in Chemistry: separation of the basic amino acids using the synthetic resin "Duolite"</i>  | 2     |
| B. E. Baker, Ph.D., <i>Lecturer in Chemistry: the isolation of amino acids from natural sources.</i>   | 2     |
| J. E. Lattimer, Ph.D., F.R.E.A., <i>Professor and Chairman of the Department of Agricultural Economics: agricultural economics.</i>  | 27    |
| E. M. DuPorte, Ph.D., <i>Associate Professor of Entomology: insect morphology; medical entomology; protozoology.</i>   | 19    |
| F. O. Morrison, B.A., B.Sc. (Agr.), M.Sc., Ph.D., <i>Associate Professor of Entomology: insect toxicology; general economic entomology.</i>  | 19    |



|   | Subject |
|---|---------|
| G. L. Burton, B.A., M.A., Ph.D., <i>Professor</i> : agricultural economics.   | 27      |
| D. L. MacFarlane, B.S.A., M.Sc., Ph.D., <i>Professor</i> : agricultural economics.  | 27      |
| W. E. Whitehead, M.Sc., <i>Lecturer in Entomology</i> : insect pests of domestic animals ; <i>Acarina, Anoplura</i> .   | 19      |
| H. R. Murray, M.Sc., <i>Associate Professor and Chairman of the Department of Horticulture</i> : breeding and improvement of vegetables and general horticulture.                     | 9       |
| A. N. Nussey, B.Sc. (Agr.), <i>Lecturer in Pomology</i> : pomology—propagation.   | 4       |
| E. W. Crampton, M.S., Ph.D., F.R.S.C., <i>Professor and Chairman of the Department of Nutrition</i> : animal nutrition ; experimental methods.  | 15      |
| G. C. Ashton, M.Sc., <i>Lecturer in Animal Nutrition</i> : animal nutrition ; experimental methods.   | 15      |
| W. Rowles, M.Sc., Ph.D., <i>Associate Professor and Chairman of the Department of Physics</i> : soil physics and radiation studies.   | 2       |
| W. F. Oliver, B.A., M.A., Ph.D., <i>Associate Professor of Physics</i> : soil physics ; radio active tracer experiments in agriculture.   | 2       |
| J. G. Coulson, M.A., D.Sc., <i>Associate Professor and Chairman of the Department of Plant Pathology</i> : deficiency diseases ; market pathology ; physiology of parasitic diseases. | 6       |
| R. A. Ludwig, M.Sc., <i>Assistant Professor of Plant Pathology</i> : cereal and forage crop pathology.  | 6       |
| W. A. Maw, M.S.A., <i>Associate Professor and Chairman of the Department of Poultry Husbandry</i> : poultry meat production and quality studies.                                      | 15, 18  |
| N. Nikolaiczuk, M.Sc., <i>Assistant Professor of Poultry Husbandry</i> : poultry nutrition studies in growth and egg production.  | 15, 18  |

### Institute of Paristology

Macdonald College, P.Q.

|   |    |
|---|----|
| T. W. M. Cameron, T.D., M.A., Ph.D., D.Sc., M.R.C.V.S., V.S. (Ontario and Quebec), F.R.S.C., <i>Director, Professor of Animal Parasitology and Chairman of the Department</i> . | 18 |
| D. Fairbairn, B.A., Ph.D., <i>Assistant Professor of Parasitology, Research Assistant</i> : biochemistry in relation to parasitology.   | 18 |
| M. J. Miller, B.Sc., M.Sc., Ph.D., M.D., <i>Assistant Professor of Parasitology, Research Assistant</i> : parasites of man in Canada.   | 18 |
| E. Munroe, M.Sc., Ph.D., <i>Lecturer in Parasitology, Research Assistant</i> : ecology of helminths.  | 18 |
| L. P. E. Choquette, B.A., M.Sc., D.V.M., <i>Lecturer in Parasitology, Research Assistant, Curator and Systemist</i> .   | 21 |

### UNIVERSITE LAVAL

#### Faculte d'Agriculture

Ste-Anne de la Pocatière, P.Q.

|   |    |
|---|----|
| F. X. Jean, B.A., M.Sc., L.Ph., <i>Dean of the Faculty</i> .                            | 7  |
| A. Sirois, B.S.A., <i>Professor agrégé of Agricultural Engineering</i> : soil drainage. | 28 |

## CANADA

|  | Subject |
|--|---------|
| L. de G. Fortin, B.L., B.S.A., <i>Professor agrégé of Animal Husbandry.</i>  | 17      |
| C. Cagné, B.S., B.S.A., M.A., <i>Professor of Agricultural Economics : land tenure ; rural credit.</i>               | 27      |
| E. Campagna, B.A., B.S.A., D.Sc., <i>Professor of Botany : quince rust ; Ustilaginales and Uredinales of Quebec.</i> | 3       |
| M.A. Pineau, B.A., L.Sc., C.D., D.Sc., F.C.I.C., <i>Professor of Biochemistry.</i>                                   | 25      |
| A. Scott, B.A., B.S.A., M.S.A., <i>Professor of Soil Technology : soil survey.</i>                                   | 2       |
| Maurice St-Pierre, B.A., B.S.A., Ph.D., <i>Professor of Animal Nutrition : swine production.</i>                     | 15      |
| Albert Alarie, B.S.A., Ph.D., <i>chargé de cours : Soil Bacteriology.</i>  | 22      |
| Joseph Chevette, B.A., B.Sc.Agr., Ph.D., <i>Professor of Agronomy.</i>   | 8       |
| Gerard Gaudette, B.A., B.Sc.Agr., M.Sc., Agr., <i>Professor agrégé Economics and Statistics.</i>                     | 29      |
| M. Auguste Mailloux, B.Sc.Agr., L.Sc., <i>Chargé de cours : geology.</i>   | 2       |
| J. Duncan, B.Sc.Agr., M.Sc.Agr., <i>Chargé de cours : entomology.</i>  | 19      |
| G. Villeneuve, B.A., B.Sc.For., Ph.D., <i>Chargé de cours : meteorology.</i>   | 26      |
| R. Delisle, B.A., <i>Forestry Engineer, Chargé de cours : silviculture.</i>  | 10      |
| L. Caron, B.A., B.Sc.Agr., <i>Chargé de cours : chemistry.</i>   | 5       |

## UNIVERSITE de MONTREAL

### Institut Agricole d'Oka

|   |      |
|---|------|
| La Trappe, P.Q.   |      |
| R. P. Norbert, o.c.r., <i>Director, L.S.A.</i>  | 21   |
| R. P. Louis Marie, o.c.r., B.A., M.S., Ph.D. : ecology of weeds                           | 3    |
| R. Fr. Isidore, o.c.r., Dr. S.A. : improvement of dairy cattle.                           | 18   |
| Fernand Corminboeuf, B.S.A., I.C., M.S., Ph.D. } chemistry and bacteriology               | 24   |
| Edouard Brochu, B.S.A., B.A., M.S. } of milk.   | 17   |
| Gustave Toupin, B.A., D.S.A., M.S. : vitamins in relation to improvement of dairy cattle. | 17   |
| Chs. A. Fontaine, B.A., D.S.A., M.S. : auximones in relation to soil fertility.           | 2    |
| P. H. Vézina, B.S.A., D.S.A. : pasture studies.   | 7, 8 |
| Firmin Létourneau, B.S.A., L.S.S. } rural and social economy in                           | 27   |
| Aimé Gagnon. } Quebec.  | 27   |
| R. Fournier, L.S.A. : agricultural mechanics.   | 28   |
| Ad. Graton, B.A., B.S.A. : poultry nutrition.   | 18   |
| A. Leduc, M.S.A., D.Sc. : pasture studies.  | 8    |
| Lawrence O'Grady, L.S.A., Ph.D. : phosphorus and soil fertility.                          | 2    |
| Jean-Marie Demers, L.S.A. : animal nutrition.   | 15   |
| R. P. Fernand, o.c.r., L.S.A. : fruit management.   | 9    |
| R. Fr. Laurent, L.S.A. : Avian genetics.  | 14   |

## UNIVERSITY OF TORONTO

### Ontario Agricultural College

Guelph, Ontario.

|  |   |
|--|---|
| W. R. Reek, M.B.E., B.S.A., LL.D., <i>President and Acting Director of Research.</i> | 1 |
|--|---|

## DEPARTMENT OF APICULTURE

|   |        |
|---|--------|
| G. F. Townsend, B.S.A., M.S.A., <i>Head of Department of Apiculture:</i><br>apicultural research. | 19, 22 |
| P. W. Burke, B.S.A., <i>Lecturer in Apiculture :</i> apicultural research.                        | 19     |

## DEPARTMENT OF ANIMAL NUTRITION

|  |    |
|--|----|
| H. D. Branion, B.A., M.A., Ph.D., <i>Head of Department of Animal Nutrition :</i> general animal and poultry nutrition work. | 15 |
| D. C. Hill, B.S.A., M.S.A., Ph.D., <i>Professor of Animal Nutrition :</i><br>general animal and poultry nutrition work.      | 15 |
| I. Motzok, B.S.A., M.S.A., Ph.D., <i>Professor of Animal Nutrition :</i><br>general animal and poultry nutrition work.       | 15 |

## DEPARTMENT OF ANIMAL HUSBANDRY

|   |    |
|---|----|
| R. G. Knox, B.S.A., <i>Head of Department of Animal Husbandry :</i><br>breeding and production problems, beef cattle. | 18 |
| G. E. Raithby, B.S.A., <i>Professor of Animal Husbandry :</i> breeding<br>and production problems, dairy cattle.      | 18 |
| A. D. Runions, B.S.A., <i>Professor of Animal Husbandry :</i> problems<br>in sheep production.                        | 18 |
| E. C. Stillwell, B.S.A., M.S., <i>Associate Professor of Animal Hus-<br/>bandry :</i> problems in meat storage.       | 18 |
| M. W. Staples, B.S.A., M.S., <i>Associate Professor of Animal Hus-<br/>bandry :</i> breeding problems, horses.        | 18 |
| R. P. Forshaw, B.S.A., M.Sc., <i>Associate Professor of Animal Hus-<br/>bandry.</i>                                   | 18 |
| W. O. Kennedy, B.S.A., <i>Associate Professor of Animal Husbandry :</i><br>horses.                                    | 18 |
| T. D. Burgess, B.S.A., : artificial insemination.   | 18 |

## DEPARTMENT OF AGRICULTURAL ENGINEERING

|  |    |
|--|----|
| C. G. E. Downing, B.E., M.E.I.C., <i>Head of Department of Agricul-<br/>tural Engineering :</i> building construction and farm sewage dis-<br>posal. | 28 |
| F. L. Ferguson, B.S.A., <i>Professor of Agricultural Engineering :</i><br>land drainage.   | 28 |
| E. G. Webb, B.S.A., <i>Associate Professor of Agricultural Engineering:</i><br>farm machinery.   | 28 |
| H. W. Kitching, B.S.A., <i>Assistant Professor of Agricultural En-<br/>gineering :</i> rural electrification.  | 28 |
| J. R. Scott, B.S.A., <i>Associate Professor of Agricultural Engineering:</i><br>farm machinery and land clearing:                                    | 28 |

## DEPARTMENT OF AGRICULTURAL ECONOMICS

|   |    |
|---|----|
| W. M. Drummond, M.A., <i>Professor and Head of the Department.</i>                  | 27 |
| H. K. Leckie, M.A., <i>Professor of Agricultural Economics.</i>                     | 27 |
| C. W. Riley, B.S.A., M.S.A., <i>Professor of Agricultural Economics.</i>            | 27 |
| N. H. High, B.S.A., M.S., <i>Associate Professor of Agricultural<br/>Economics.</i> | 27 |



## CANADA

- |   |               |
|---|---------------|
| M. W. Farrell, M.A., A.M., Ph.D., <i>Associate Professor of Agricultural Economics.</i> | Subject<br>27 |
| S. H. Lane, B.S.A., M.Sc., <i>Assistant Professor of Agricultural Economics.</i>        | 27            |

### DEPARTMENT OF BACTERIOLOGY

- |   |    |
|---|----|
| E. H. Garrard, B.S.A., M.S.A., <i>Head of Department of Bacteriology: pullorum control and general agricultural bacteriology.</i> | 22 |
| A. Davey, B.S.A., <i>Professor of Bacteriology: plant diseases and soil microbiology.</i>   | 22 |
| D. B. Shutt, B.S.A., C.S.I. (C), <i>Associate Professor of Bacteriology: general agricultural bacteriology.</i>                   | 22 |
| L. A. McDermott, B.S.A., M.S.A., <i>Associate Professor of Bacteriology: general agricultural bacteriology.</i>                   | 22 |
| M. L. Wright, B.S.A., M.S.A., C.S.I. (C), <i>Associate Professor of Bacteriology: pullorum antigen studies.</i>                   | 22 |
| F. E. Chase, B.S.A., M.S.A., <i>Associate Professor of Bacteriology: salmonella food poisoning types in fowl.</i>                 | 22 |
| J. W. Connor, B.S.A., M.S.A., C.S.I. (C), <i>Assistant in Bacteriology: microbiology of foods.</i>                                | 22 |
| W. H. Burton, B.S.A., <i>Assistant Professor of Bacteriology: pullorum control and fumigation studies.</i>                        | 22 |
| F. H. S. Newbould, B.S.A., <i>Assistant in Extension of Bacteriology: pullorum control.</i>                                       | 22 |
| J. A. Carpenter, B.S.A., M.S.A., <i>Assistant Professor of Bacteriology: general agricultural bacteriology.</i>                   | 22 |
| G. W. Anderson, B.S.A., M.S.A., <i>Assistant in Research.</i>   | 22 |

### DEPARTMENT OF DAIRY HUSBANDRY

- |   |    |
|---|----|
| W. H. Sproule, B.S.A., <i>Head of Department of Dairy Husbandry: cheese and butter.</i>             | 17 |
| F. W. Hamilton, B.S.A., <i>Associate Professor of Dairy Husbandry: butter manufacture.</i>          | 17 |
| O. R. Irvine, B.S.A., M.S.A., <i>Associate Professor of Dairy Husbandry: cheddar cheese.</i>        | 17 |
| A. G. Leggatt, B.S.A., M.S.A., <i>Assistant in Research in Dairy Husbandry: butter manufacture.</i> | 17 |
| A. M. Pearson, B.S.A., <i>Lecturer in Dairy Husbandry: ice-cream.</i>                               | 17 |

### DEPARTMENT OF BOTANY

- |   |   |
|---|---|
| J. D. MacLachlan, B.A., A.M., Ph.D., <i>Head of Department of Botany: minor element deficiencies particularly boron and manganese; turnip diseases.</i> | 6 |
| D. R. Sands, B.S.A., M.S., <i>Professor of Botany: vegetable diseases.</i>  | 6 |
| W. G. Evans, B.S.A., M.S., <i>Associate Professor of Botany: weed control and fruit diseases.</i>   | 6 |
| R. O. Bibbey, B.S.A., M.Sc., Ph.D., <i>Professor of Botany.</i>   | 6 |
| F. H. Montgomery, B.A., M.A., <i>Associate Professor of Botany.</i>   | 6 |
| A. A. Wellwood, B.A., B.Sc., <i>Associate Professor of Botany.</i>  | 6 |

|  |              |
|--|--------------|
| S. A. Simmons, B.S.A., M.A., <i>Assistant Professor of Botany: ornamental diseases with special reference to gladioli.</i> | Subject<br>6 |
| R. T. Riddell, B.A., M.A., <i>Lecturer in Botany: cytogenetics with special reference to alsike clover.</i>                | 6            |

## DEPARTMENT OF CHEMISTRY

|  |    |
|--|----|
| R. S. Brown, M.A., Ph.D., <i>Head of Department of Chemistry: chemistry of hercibides</i>  | 24 |
| L. R. Bryant, M.A., F.C.I.C., <i>Professor of Chemistry and Dairy Chemist: dairy science and technology.</i>                               | 24 |
| L. A. Birk, B.A., M.S., F.C.I.C., <i>Associate Professor of Chemistry: insecticides; fungicides and herbicides.</i>                        | 24 |
| D. MacDougall, B.A., M.Sc., Ph.D., <i>Associate Professor of Chemistry: food and plant analysis.</i>                                       | 24 |
| D. Waghorne, B.S.A., M.C.I.C., <i>Assistant Professor of Chemistry: plant lipoids.</i>   | 24 |
| W. H. Brown, M.A., M.C.I.C., <i>Assistant Professor of Chemistry: synthesis of insecticides; chemurgy of hexoses and related products.</i> | 24 |
| J. R. Rothwell, B.S.A., <i>Assistant Professor.</i>  | 24 |

## DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY

|  |    |
|--|----|
| A. W. Baker, B.S.A., <i>Professor of Systematic Entomology and Zoology and Head of the Department: insect taxonomy and morphology.</i> | 19 |
| H. W. Goble, B.S.A., M.S., <i>Provincial Entomologist and Professor of Entomology: insect control.</i>                                 | 19 |
| R. H. Ozburn, B.S.A., M.S., <i>Professor of Entomology: nosema apis and histological structure of insects.</i>                         | 19 |
| A. G. McNally, M.A., <i>Associate Professor of Entomology: agricultural zoology.</i>   | 19 |
| W. E. Heming, B.S.A., Ph.D., <i>Associate Professor of Entomology.</i>   | 19 |
| W. C. Allan, B.S.A., <i>Assistant Professor of Entomology.</i>   | 19 |
| A. J. Musgrove, B.Sc., M.Sc., A.R.C.S., D.I.C., <i>Assistant Professor of Entomology.</i>  | 19 |
| J. G. Oughton, B.A., Ph.D., <i>Associate Professor: soil protozoa and nematodes.</i>   | 19 |

## DEPARTMENT OF FIELD HUSBANDRY

|   |          |
|---|----------|
| G. P. McRostie, B.S.A., M.S.A., Ph.D., <i>Head of Department of Field Husbandry: field crops.</i> | 2, 8, 13 |
| O. McConkey, B.S.A., M.S., Ph.D., <i>Professor of Field Husbandry: forage crops.</i>              | 2, 8, 13 |
| J. Laughland, B.S.A., <i>Professor of Field Husbandry: nematode control.</i>                      | 2, 8, 13 |
| J. R. Weir, B.S.A., M.Sc., Ph.D., <i>Professor of Field Husbandry: forage crops.</i>              | 2, 8, 13 |
| R. Keegan, B.S.A., <i>Associate Professor of Field Husbandry: cereals and alfalfa.</i>            | 2, 8, 13 |

|   |          |
|---|----------|
|   | Subject  |
| D. N. Huntley, B.S.A., M.S.A., <i>Lecturer in Field Husbandry</i> : | 2, 8, 13 |
| barley investigations.  |          |
| R. G. Fulkerson, B.S.A., <i>Assistant in Research</i> .             | 2, 8, 13 |
| W. E. Tassell, B.S.A., M.S.A., <i>Lecturer</i> .                    | 2, 8, 13 |

## DEPARTMENT OF HORTICULTURE

|  |   |
|--|---|
| J. S. Shoemaker, B.S.A., M.Sc., Ph.D., <i>Head of Department of Horticulture</i> :           | 9 |
| fruits.  |   |
| T. O. Graham, B.S.A., M.S., <i>Professor of Horticulture</i> :                               | 9 |
| vegetables.  |   |
| R. Goodwin-Wilson, B.S.A., <i>Associate Professor of soils and greenhouse floriculture</i> . | 9 |
| T. H. Jones, B.S.A., <i>Assistant Professor of Horticulture</i> :                            | 9 |
| greenhouse vegetables.   |   |
| E. W. Franklin, B.S.A., M.S.A., <i>Assistant Professor of Horticulture</i> .                 | 9 |
| J. A. Weall, <i>Technical Instructor in Horticulture</i> :                                   | 9 |
| landscaping.   |   |
| C. C. Filman, B.S.A., M.Sc., <i>Lecturer in Horticulture</i> :                               | 9 |
| vegetables on muck.  |   |
| J. C. Taylor, <i>Assistant in Horticulture</i> :   | 9 |
| floriculture.  |   |
| Evelyn Stevenson, B.A., <i>Assistant in Horticulture</i> :                                   | 9 |
| processing fruits and vegetables.  |   |
| Louise W. Heringa, <i>Instructor in Horticulture</i> :                                       | 9 |
| ericaceous plants.   |   |
| Margaret L. Ashmore, B.A., M.A., <i>Assistant in Research</i> .                              | 9 |
| H. W. Burley, B.S.A., <i>Assistant in Research</i> .   | 9 |

## DEPARTMENT OF POULTRY HUSBANDRY

|  |            |
|--|------------|
| J. R. Cavers, B.S.A., M.S., <i>Head of Department of Poultry Husbandry</i> :       | 14, 15, 18 |
| disease control ; nutrition ; hatchability.  |            |
| E. S. Snyder, B.S.A., M.S., <i>Professor of Poultry Husbandry</i> :                | 14, 15, 18 |
| genetics ; marketing.  |            |
| S. J. Slinger, B.S.A., M.S.A., <i>Assistant in Research in Poultry Husbandry</i> : | 14, 15, 18 |
| nutrition ; hatchability.  |            |
| J. E. Bergey, B.S.A., <i>Professor of Poultry Husbandry</i> :                      | 14, 15, 18 |
| nutrition ; incubation.  |            |
| J. H. Pettit, B.S.A., M.S.A., <i>Associate Professor of Poultry Husbandry</i> .    | 14, 15, 18 |
| C. M. Huntsman, B.S.A., <i>Assistant Professor of Poultry Husbandry</i> .          | 14, 15, 18 |
| A. E. Ferguson, B.S.A., <i>Assistant in Research</i> .                             | 14, 15, 18 |
| A. M. Morphet, B.S.A., <i>Assistant in Research in Poultry Husbandry</i> :         | 14, 15, 18 |
| turkey research.   |            |
| K. M. Gartley, B.S.A., <i>Assistant in Research in Poultry Husbandry</i> :         | 14, 15, 18 |
| nutrition and physiology.  |            |

## DEPARTMENT OF SOILS

|  |   |
|--|---|
| F. A. Stinson, B.S.A., M.S.A., Ph.D., <i>Head of Department of Soils</i> :     | 2 |
| soil surveys ; soil fertility ; soil chemistry and plant nutrition.            |   |
| F. F. Morwick, B.S.A., M.S.A., F.C.I.C., <i>Associate Professor of Soils</i> . | 2 |
| T. J. Heeg, B.S.A., F.C.I.C., <i>Associate in Research in Soils</i> :          | 2 |
| rapid chemical tests.  |   |
| N. J. Thomas, B.S.A., M.Sc., <i>Associate in Extension</i> .                   | 2 |
| W. T. Ewen, B.S.A., M.S.A., <i>Associate in Extension</i> .                    | 2 |



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|--|---------|
|  | Subject |
| L. R. Webber, B.S.A., <i>Soil Specialist in Soils</i> : soil conservation.       | 2       |
| A. L. Willis, B.S.A., <i>Assistant in Research in Soils</i> : soil chemistry.    | 2       |
| J. W. Ketcheson, B.S.A., <i>Assistant in Research in Soils</i> : soil fertility. | 2       |
| A. G. Caldwell, B.S.A., M.S.A., <i>Soil Specialist</i> .                         | 2       |
| R. R. Bruce, B.S.A., <i>Soil Specialist</i> .                                    | 2       |
| B. C. Matthews, B.S.A., A.M., <i>Lecturer</i> .                                  | 2       |
| J. A. Shivas, B.S.A., M.S.A., <i>Assistant in Research</i> .                     | 2       |
| G. Baker, B.S.A., <i>Soil Specialist</i> .                                       | 2       |

## DEPARTMENT OF PHYSICS :

|   |    |
|---|----|
| R. C. Moffatt, M.A., <i>Head of Department of Physics</i> : statistical analysis. | 29 |
| E. B. MacNaughton, B.A., M.A., Ph.D., <i>Associate Professor of Physics</i> .     |    |
| J. G. F. Morton, B.Sc., B.Eng., <i>Associate Professor of Physics</i> .           |    |
| J. G. Smith, B.S.A., <i>Lecturer in Physics</i> : agricultural meteorology.       | 26 |
| P. F. Clarke, B.A.Sc., <i>Lecturer</i> .  |    |

**Ontario Veterinary College**

|  |            |
|--|------------|
| A. L. MacNabb, D.V.M., D.V.Sc., <i>Principal, Ontario Veterinary College</i> .                         | 1          |
| J. A. Henderson, B.V.Sc., M.S., <i>Professor of Medicine</i> : cattle diseases.                        | 14         |
| D. L. T. Smith, B.V.Sc., <i>Professor of Pathology</i> : veterinary research.                          | 16         |
| T. L. Jones, B.V.Sc., M.Sc., C.S.I. (C), <i>Professor of Pathology</i> : veterinary research.          | 16         |
| J. D. Schroder, D.V.M., <i>Assistant in Research Department of Pathology</i> : veterinary research.    | 16         |
| A. F. Bain, D.V.M., <i>Professor, Department of Preventive Medicine and Hygiene</i> : bacteriology.    | 22         |
| J. McGregor, D.V.M., <i>Associate Professor, Department of Parasitology</i> .                          | 19, 21, 23 |
| J. P. W. Gilman, B.V.Sc., <i>Associate Professor, Department of Anatomy (Histology and Embryology)</i> | 13         |
| W. R. LeGrow, B.S.A., D.V.M., M.S., Ph.D., <i>Department of Extension and Research</i> : brucellosis.  | 14         |
| J. H. Ballantyne, D.V.M., <i>Professor, Department of Anatomy</i> : anatomical research.               | 13         |
| B. M. McCraw, B.A., <i>Assistant Professor, Department of Parasitology</i> .                           | 19, 21, 23 |

**ONTARIO DEPARTMENT OF AGRICULTURE****Horticultural Experimental Station, Vineland Station**

|   |            |
|---|------------|
| E. F. Palmer, B.S.A., LL.D., <i>Director</i>                                | 1, 2, 4, 9 |
| W. H. Upshall, B.S.A., M.S., Ph.D., <i>Chief in Research</i> : tree fruits. | 9          |
| O. J. Robb, B.S.A., <i>Assistant in Research</i> : vegetables.              | 4, 9       |
| G. H. Dickson, B.S.A., <i>Assistant in Research</i> : tree fruits.          | 4, 9       |

## CANADA

|   | Subject  |
|---|----------|
| J. R. van Haarlem, B.S.A., M.S., <i>Associate in Research</i> : Orchard soil management.          | 2, 9, 25 |
| D. L. Bailey, B.A., M.S., Ph.D., <i>Pathologist</i> : plant diseases.                             | 3, 6     |
| C. B. Kelly, B.S.A., M.S., <i>Assistant in Extension</i> : pomology.                              | 6, 9     |
| A. N. L. Butler, B.S.A., M.S., <i>Associate in Research</i> : vegetable canning crops.            | 9        |
| E. A. Kerr, B.A., M.Sc., Ph.D., <i>Assistant in Research</i> : greenhouse and canning vegetables. | 4, 9     |
| J. F. Brown, B.S.A., <i>Assistant in Research</i> : small fruits.                                 | 4, 9     |
| J. H. L. Truscott, B.Sc., M.Sc., Ph.D., <i>Professor</i> : refrigeration fruits and vegetables.   | 9, 30    |
| O. A. Bradt, B.S.A., <i>Assistant in Research</i> : tree fruits, grapes.                          | 4, 9     |

## ONTARIO RESEARCH FOUNDATION

43, Queen's Park, Toronto 5, Canada. Tel. : KI. 2191.

|   |        |
|---|--------|
| H. B. Speakman, D.Sc., <i>Director</i> .                                    | 1      |
| L. J. Chapman, B.S.A., M.Sc., <i>Crop Ecologist</i> .                       | 2, 26  |
| A. M. Fallis, B.A., M.A., Ph.D., <i>Parasitologist</i> .                    | 21     |
| D. F. Putnam, B.S.A., Ph.D., (part-time), <i>Geographer</i> .               | 2, 26  |
| Marie Sanderson, B.A., M.A., <i>Climatologist</i> .                         | 26     |
| B. P. Skey, A.E., M.S.A., Ph.D., <i>Agricultural Economist</i> .            | 27     |
| J. F. A. Sprent, B.Sc., Ph.D., M.R.C.V.S. (Lond.), <i>Helminthologist</i> . | 21, 22 |
| D. M. Davies, B.A., Ph.D., <i>Entomologist</i> .                            | 21     |
| H. B. Marshall, M.A., Ph.D., <i>Wood Chemist</i> .                          | 11     |
| D. A. Sitch, B.Sc., Ph.D., <i>Wood Chemist</i> .                            | 11     |
| A. C. Shaw, B.Sc., <i>Wood Chemist</i> .                                    | 11     |

## UNIVERSITY OF MANITOBA

Winnipeg.

### Faculty of Agriculture

|  |        |
|--|--------|
| J. W. G. MacEwan, B.S.A., M.Sc., <i>Dean of Faculty of Agriculture and Home Economics</i> .  | 1      |
| A. V. Mitchener, <i>Professor of Entomology</i> : economic entomology ; apiculture.  | 19     |
| G. L. Shanks, B.S.A., M.S., <i>Associate Professor of Agricultural Engineering</i> : farm machinery.   | 28     |
| J. M. Brown, N.D.D., B.S.A., M.S., <i>Professor of Animal Science</i> : sheep ; dairy cattle ; nutrition.  | 15, 17 |
| G. C. Hodgson, B.S.A., M.S., <i>Associate Professor of Poultry Husbandry</i> : nutrition.  | 14, 15 |
| J. H. Ellis, B.S.A., M.S., <i>Professor of Soils</i> : soils.  | 2      |
| Alfred Savage, B.S.A., D.V.M., M.R.C.V.S., <i>Provincial Animal Pathologist, Professor of Bacteriology and Animal Pathology</i> : animal reproduction and animal diseases. | 16, 22 |
| Norman James, B.S.A., M.S., Ph.D., <i>Professor of Bacteriology</i> : soil microbiology.   | 20, 22 |
| M. C. Jamieson, B.S.A., M.Sc., <i>Assistant Professor of Bacteriology</i> : dairy bacteriology.  | 20, 22 |

|   |                   |
|---|-------------------|
| J. M. Isa, B.S.A., M.Sc., B.V.Sc., V.S., <i>Honorary Lecturer in Animal Science, Assistant Animal Pathologist</i> : parasitology. | Subject<br>16, 22 |
| A. D. Robinson, B.A., M.A., Ph.D., <i>Assistant Professor of Chemistry</i> : agricultural chemistry.                              | 5, 25             |
| R. W. Brown, B.S.A., M.S., <i>Professor of Dairy Science</i> : dairy products.  | 17                |
| P. J. Olson, B.S., M.S., Ph.D., <i>Professor of Plant Science</i> : plant breeding.   | 4, 7, 12          |
| E. T. Anderson, B.Sc., M.Sc., <i>Assistant Professor of Plant Science</i> : vegetable breeding ; fruits.                          | 9                 |
| Solomon Sinclair, B.S.A., M.Sc., <i>Assistant Professor of Political Economy</i> : farm management.                               | 27                |
| R. R. Lejeune, B.S.A., M.Sc., <i>Honorary Lecturer in Entomology</i> : forest insects.  | 19                |
| Peter A. Kondra, B.S.A., M.Sc., <i>Assistant Professor of Poultry Husbandry</i> : poultry breeding.                               | 14, 15            |
| Jack J. Paterson, B.S.A., M.Sc., <i>Assistant Professor of Agricultural Engineering</i> : farm machinery.                         | 28                |
| R. F. Peterson, B.S.A., M.S., Ph.D., <i>Honorary Lecturer in Plant Science</i> .  | 4                 |
| E. C. Martin, B.S.A., M.Sc., <i>Honorary Lecturer in Entomology</i> .   | 19                |
| N. E. K. Campbell, B.S.A., M.S., <i>Assistant Professor of Bacteriology</i> : bacteriology of soils and grains.                   | 20, 22            |
| S. B. Helgason, B.S.A., M.S., <i>Assistant Professor of Plant Science</i> : forages.  | 4, 8              |
| James A. Hobbs, B.S.A., M.Sc., Ph.D., <i>Assistant Professor of Soils</i> : soils.  | 2                 |
| E. W. Stringam, B.S.A., M.Sc., Ph.D., <i>Assistant Professor of Animal Science</i> : animal breeding.                             | 14                |
| A. J. Thorsteinson, B.S.A., Ph.D., <i>Assistant Professor of Entomology</i> : insect physiology.                                  | 19                |
| J. D. Wahn, B.S.A., M.Sc., <i>Assistant Professor of Agricultural Economics</i> : marketing studies.                              | 27, 29            |

## UNIVERSITY OF SASKATCHEWAN

Saskatoon.

### Faculty of Agriculture

|  |            |
|--|------------|
| V. E. Graham, B.S.A., M.S., Ph.D., <i>Dean, Faculty of Agriculture</i> : dairy bacteriology.   | 1, 22      |
| W. P. Thompson, B.A., M.A., Ph.D., D.Sc., F.R.S.C., <i>President of the University</i> : cytogenetic investigations especially in cereals. | 1, 3, 4    |
| C. F. Patterson, B.S.A., M.S., Ph.D., <i>Professor of Horticulture</i> : fruit breeding.   | 4, 9       |
| V. Fowke, B.A., M.A., Ph.D., <i>Associate Professor of Economics</i> : agricultural economics.   | 27         |
| M. Champlin, B.S.A., M.S., <i>Professor of Field Husbandry</i> : crop improvement and cultural methods.                                    | 7, 8, 12   |
| J. B. Harrington, B.S.A., M.S., Ph.D., <i>Professor of Field Husbandry</i> : cereal breeding.  | 4, 7, 8    |
| A. H. Ewen, M.A., B.Sc., <i>Professor of Animal Husbandry</i> : animal breeding and management.  | 14, 15, 17 |



## CANADA

|  | Subject    |
|--|------------|
| J. S. Fulton, D.V.M., D.V.S., <i>Professor and Director, Animal Diseases Laboratory</i> : virus diseases.                | 13, 16, 22 |
| J. L. Miller, B.V.S., <i>Associate Professor in Veterinary Medicine</i> : diseases of farm animals.                      | 13, 16     |
| W. J. Rae, B.S.A., M.S., <i>Professor of Poultry</i> : poultry breeding and management.                                  | 14, 18     |
| J. B. O'Neil, B.S.A., M.S.A., <i>Associate Professor of Poultry</i> : poultry feeding and nutrition.                     | 15, 18     |
| E. A. Hardy, B.Agr.Eng., M.S., <i>Professor of Agricultural Engineering</i> : farm implements; fuels and farm buildings. | 28         |
| D. L. Gibson, M.B.E., B.S.A., M.Sc., Ph.D., <i>Associate Professor of Dairying</i> : manufacture of dairy products.      | 17, 25     |
| H. Van Vleit, B.S.A., M.Sc., <i>Professor of Farm Management</i> : land economics.                                       | 27, 29     |
| J. Michell, B.S.A., M.S., Ph.D., <i>Professor of Soils</i> : soil survey and soil fertility.                             | 2, 24      |
| H. G. Dion, B.S.A., M.S., Ph.D., <i>Associate Professor of Soils</i> : soil chemistry.                                   | 2, 24      |
| E. Y. Spencer, B.Sc., M.Sc., Ph.D., <i>Associate Professor of Chemistry</i> : cereal chemistry.                          | 24, 25     |
| H. Gerrie, B.S.A., M.Sc., <i>Assistant in Field Husbandry</i> : management of experimental plots.                        | 4, 7, 12   |
| T. C. Vanterpool, B.S.A., M.Sc., <i>Professor of Plant Pathology</i> : cereal and flax diseases.                         | 3, 6, 20   |
| T. J. Arnason, B.Sc., M.A., Ph.D., <i>Associate Professor of Biology</i> : plant genetics.                               | 4, 14      |
| B. W. Currie, B.Sc., M.S., Ph.D., <i>Professor of Physics</i> : meteorology and climatology.                             | 26         |
| J. W. T. Spinks, Ph.D., F.R.S.C., <i>Professor of Chemistry</i> : radioactive tracers.                                   | 2, 24      |
| J. A. Weir, Ph.D., <i>Associate Professor of Animal Husbandry</i> : animal genetics.                                     | 14, 17     |
| L. H. Shebeski, B.S.A., M.Sc., <i>Associate Professor of Field Husbandry</i> : cereal breeding.                          | 4, 12      |
| W. L. Hutcheon, M.Sc., <i>Assistant Professor in Soils</i> : soil physics.   | 2, 24      |
| J. Milton Bell, B.Sc., M.S., Ph.D., <i>Assistant Professor in Animal Husbandry</i> : animal nutrition.                   | 15, 17     |
| R. T. Coupland, B.S.A., Ph.D., <i>Assistant Professor in Plant Ecology</i> : plant ecology.                              | 3, 8, 12   |

## UNIVERSITY OF ALBERTA

Edmonton.

### Faculty of Agriculture

|  |        |
|--|--------|
| R. D. Sinclair, B.S.A., M.S., Ph.D., <i>Dean of the Faculty of Agriculture and Professor of Animal Husbandry</i> : investigations in animal nutrition. | 15, 18 |
| A. W. Henry, M.S.A., Ph.D., <i>Professor of Plant Pathology</i> : diseases of crop plants.   | 6      |
| A. G. McCalla, B.Sc., M.Sc., Ph.D., <i>Professor of Plant Science</i> : chemistry and physiology of wheat; protein chemistry.                          | 5      |

## CANADA

|  | Subject |
|--|---------|
| J. D. Newton, B.S.A., Ph.D., <i>Professor of Soils</i> : soil micro-biology and soil surveys.  | 2       |
| J. Macgregor Smith, B.S.A., <i>Professor of Agricultural Engineering</i> : regional use of farm machinery (soil drifting control).                   | 28      |
| E. H. Strickland, M.Sc., <i>Professor of Entomology</i> : grain crop pests.  | 19      |
| H. R. Thornton, B.Sc., Ph.D., <i>Professor of Dairying</i> : butter defects and rancidity in dairy products.   | 22      |
| J. E. Bowstead, M.Sc., Ph.D., <i>Associate Professor of Animal Husbandry</i> : live stock breeding and nutritional investigations.                   | 14, 17  |
| D. R. Clandinin, B.S.A., M.S.A., <i>Associate Professor of Poultry Husbandry</i> : investigations in poultry nutrition.                              | 18      |
| R. J. Hilton, B.Sc., Ph.D., <i>Associate Professor of Horticulture</i> : breeding and testing new fruit varieties for the Prairies.                  | 9       |
| Leroy Peter Vernon Johnson, B.Sc., M.Sc., Ph.D., <i>Associate Professor of Genetics and Plant Breeding</i> : improvement of cereal and forage crops. | 4       |
| L. W. McElroy, B.Sc., M.Sc., Ph.D., <i>Associate Professor of Animal Husbandry</i> : investigations in animal nutrition.                             | 15, 18  |
| C. F. Bentley, B.Sc., M.Sc., Ph.D., <i>Assistant Professor of Soils</i> : fertilizers and crops.   | 2       |
| John Patterson Bowland, B.S.A., M.S., Ph.D., <i>Assistant Professor of Animal Husbandry</i> : investigations in animal nutrition.                    | 15      |
| W. G. Corns, B.Sc., M.Sc., Ph.D., <i>Assistant Professor of Plant Science</i> : plant physiological investigations.                                  | 12      |
| Brian Hocking, B.Sc., M.Sc., <i>Assistant Professor of Entomology</i> : grain crop pests.  | 19      |
| Alexander Robinson Robblee, B.Sc., M.Sc., Ph.D., <i>Assistant Professor of Poultry Husbandry</i> : investigations in poultry nutrition.              | 18      |
| John Alfred Toogood, B.Sc., Ph.D., <i>Assistant Professor of Soils</i> : soil physics.   | 2       |
| John Unrau, B.S.A., M.Sc., Ph.D., <i>Assistant Professor of Genetics and Plant Breeding</i> : improvement of cereal and forage crops.                | 2       |
| F. W. Wood, B.Sc., M.Sc., <i>Assistant Professor of Dairying</i> : butter defects and rancidity in dairy products.                                   | 22      |
| Robert Hugh Knowles, B.S.A., <i>Lecturer in Horticulture</i> : studies in landscaping.   | 9       |
| Warren Edward Smith, B.Sc., M.Sc., <i>Lecturer in Field Crops</i> : crop improvement.  | 12      |
| Lloyd Muir Smith, B.Sc., M.Sc., <i>Lecturer in Dairying</i> : estimation of milk lipase.   | 17      |
| B. T. Stephanson, B.E., <i>Lecturer in Agricultural Engineering</i> : machinery and methods for harvesting forage crops for seed.                    | 17      |
| A. S. Ward, B.S.A., M.Sc., <i>Lecturer in Soils</i> : soil fertility.  | 2       |

## UNIVERSITY OF BRITISH COLUMBIA

## FACULTY OF AGRICULTURE

|   |        |
|---|--------|
| B. A. Eagles, B.A., Ph.D., <i>Dean of the Faculty of Agriculture</i> : dairy bacteriology and biochemistry. | 22, 25 |
|---|--------|

## CANADA

Subject

### DEPARTMENT OF AGRICULTURAL ECONOMICS

- F. M. Clement, B.S.A., M.A., D.Sc. (Honoris Causa), *Professor and Head* (Retiring). 27
- W. J. Anderson, B.S.A., M.Sc. (Sask.), *Associate Professor* : agricultural economics and farm management. 27

### DEPARTMENT OF AGRICULTURAL ENGINEERING

- J. R. W. Young, B.S.A., M.Sc. (Sask.), *Associate Professor and Acting Head of the Department* : farm machinery and agricultural mechanics and engineering. 28
- F. C. Leroux, B.A. (Sask.), *Associate Professor* : food processing. 28
- T. L. Coulthard, B.E. (Sask.), *Assistant Professor* : irrigation and drainage. 28

### DEPARTMENT OF AGRONOMY

- G. G. Moe, B.S.A., M.Sc., Ph.D., *Professor and Head* : genetics studies in alfalfa. 4
- D. G. Laird, B.S.A., M.S., Ph.D., *Professor of Soils* : activators for soil bacteria. 2
- V. C. Brink, B.S.A., M.S.A., Ph.D., *Associate Professor* : genetics ; range management studies. 8
- C. A. Rowles, M.Sc., D.Phil., *Associate Professor* : chemical and physical properties of soils ; soil survey. 2

### DEPARTMENT OF ANIMAL HUSBANDRY

- H. M. King, B.S.A., M.S., *Professor and Head* : dairy cattle production and classification. 17
- S. N. Wood, B.S.A., D.V.M., *Professor* : animal diseases. 13
- J. C. Berry, B.S.A., M.S.A., Ph.D., *Associate Professor* : animal breeding, genetics. 14
- A. J. Wood, B.S.A., M.S.A., Ph.D., *Associate Professor* : animal nutrition. 15

### DEPARTMENT OF DAIRYING

- B. A. Eagles (above), *Professor and Head*. 9
- J. J. R. Campbell, B.S.A., Ph.D., *Associate Professor* : chemistry of bacteria. 25
- Nora Neilson, B.S.A., M.S.A., *Instructor* : bacteriological chemistry ; mycology. 20

### DEPARTMENT OF HORTICULTURE,

- A. F. Barss, A.B., B.S. in Agr., M.S., Ph.D., *Professor and Head* : seed growing and plant breeding ; fruit and vegetable processing. 9
- G. H. Harris, B.S.A., M.S., Ph.D., *Professor* : plant nutrition studies : food values of horticultural crops ; respiration ; growth studies. 3
- J. W. Neill, B.S.A., *Assistant Professor* : floriculture and landscape gardening. 9



## DEPARTMENT OF POULTRY HUSBANDRY

|   |        |
|---|--------|
| E. A. Lloyd, B.S.A., M.S.A., <i>Professor and Head</i> : poultry breeding for meat and egg production ; development of new breeds ; management. | 14     |
| Jacob Biely, B.S.A., M.S.A., <i>Associate Professor</i> : poultry nutrition ; pathology.  | 15, 16 |

## FIELDS OF RESEARCH

*Staff of Department of Forestry*

|  |           |
|--|-----------|
| Lowell Besley, B.S. (Cornell), M.F. (Yale), <i>Professor and Head of Department</i> : forest economics and finance.  | 10, 27    |
| F. Malcolm Knapp, B.S.F. (Syracuse), M.S.F. (Washington), <i>Professor and Director of University Forests</i> : logging engineering ; utilization and marketing. | 1, 11, 28 |
| George S. Allen, M.A.Sc. (Brit. Col.), Ph.D. (California), <i>Professor</i> : silvics, silviculture, forest genetics.  | 1, 4, 10  |
| Braham G. Griffith, M.A. (Brit. Col.), M.F. (Harvard), Ph.D. (Washington), <i>Associate Professor</i> : silvics, forest soils, forest management.                | 2, 3, 10  |
| Robert W. Wellwood, B.A.Sc. (Brit. Col.), Ph.D. (Duke), <i>Associate Professor</i> : wood technology and mechanics, plywood, forest products.                    | 11, 30    |
| William L. Johnson, B.Sc.F. (New Brunswick), <i>Associate Professor</i> : aerial forest surveys and mapping.   | 28        |
| Harry C. Haines, B.Sc. (Purdue), M.F. (Duke), <i>Assistant Professor</i> : forest fire protection.   | 10        |
| John W. Ker, B.A.Sc. (Brit. Col.), <i>Assistant Professor</i> : forest mensuration, forest research methods.   | 10, 29    |

# COMMONWEALTH OF AUSTRALIA

## A.—COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

Subject

314, Albert Street, East Melbourne, C.2., Victoria. (Tel. —JA. 6611).

I. Clunies Ross, D.V.Sc., *Chairman*.

G. A. Cook, M.C., M.Sc., B.M.E., *Secretary*.

### 1. Division of Animal Health and Production

(a) DIVISIONAL HEADQUARTERS, and

(b) ANIMAL HEALTH RESEARCH LABORATORY

Flemington Road, Parkville, Melbourne, N.2., Victoria. Tel. :  
FJ.4659).

|  |       |
|--|-------|
| L. B. Bull, D.V.Sc., <i>Chief of Division</i> : pathology.       | 1, 16 |
| A. J. Vasey, B.Agr.Sc., <i>Divisional Secretary</i> .            | 17    |
| N. M. Tulloh, B.Agr.Sc., <i>Assistant Divisional Secretary</i> . | 18    |

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|  |           |
|--|-----------|
| A. W. Turner, O.B.E., D.Sc., D.V.Sc., <i>Officer in Charge</i> : clostridiosis, wheat, toxicity, bacterial enzymes | 1, 16, 22 |
| T. S. Gregory, Dip.Bact., B.V.Sc. : tuberculosis, foot-rot, contagious abortion.                                   | 16, 22    |
| D. Murnane, B.V.Sc. : bovine mastitis (clinical chemotherapy, serology)  | 16, 22    |
| A. D. Campbell, L.V.Sc. : pleuro-pneumonia.  | 22        |
| R. H. Watson, D.Sc.Agr. : sex physiology of sheep.   | 13        |
| A. T. Dann, M.Sc. : immuno-chemistry, bovine haematuria.   | 22, 25    |
| A. T. Dick, M.Sc. : copper poisoning, chemical pathology.  | 16, 25    |
| E. Munch-Petersen, M.Sc., B.A., M.I.F. : bovine mastitis (bacteriology).   | 22<br>14  |
| F. Skaller, B.Agr.Sc. : poultry breeding.  |           |
| A. W. Rodwell, M.Sc. : bacteriology, bacterial enzymes.  | 22, 25    |
| J. B. Bingley, D.A.C. : copper poisoning, analytical chemistry.  | 24, 25    |
| Miss C. E. Eales, B.Sc. : bacteriology   | 22        |
| Miss M. J. Monsbourgh, B.Sc. : bovine mastitis (bacteriology)  | 22        |
| H. G. Turner, B.Agr.Sc. : dairy cattle production.   | 17        |
| G. Alexander, B.Agr.Sc. : sex physiology of sheep, oestrogen assay.  | 13        |
| G. W. Grigg, B.Sc. : animal genetics   | 14        |
| H. M. Radford, B.Sc. : sex physiology of sheep.  | 13        |
| Miss V. E. Hodgetts, B.Sc. : bacteriology and biochemistry.  | 22, 25    |

(c) McMASTER ANIMAL HEALTH LABORATORY

Parramatta Road, Glebe, New South Wales (Tel : M.W. 1600).

|   |           |
|---|-----------|
| D. A. Gill, M.R.C.V.S., D.V.S.M., <i>Officer in Charge</i> : bacteriology and pathology | 1, 16, 22 |
| H. McL. Gordon, B.V.Sc. : helminthology (epidemiology and anthelmintics)                | 21        |
| M. C. Franklyn, M.Sc., Ph.D. (Cantab.) : sheep and cattle nutrition.                    | 15, 25    |

|     |  |               |
|-----|--|---------------|
|     | D. F. Stewart, B.V.Sc., Dip.Bact. (Lond.) : bacteriology and immunology.                           | Subject<br>22 |
|     | W. P. Rogers, M.Sc., Ph.D. (Lond.) : helminth physiology.  | 21, 25        |
|     | C. R. Austin, M.Sc., B.V.Sc. : sex physiology, endocrinology.                                      | 13            |
|     | R. L. Reid, B.Sc.Agr., Ph.D. (Cantab.) : ruminant metabolism.                                      | 15, 25        |
|     | B. A. Forsyth, B.V.Sc. : helminthology.  | 21            |
|     | V. Massey, B.Sc. (Hons.) : biochemistry.   | 25            |
|     | Miss M. T. Scott, B.Sc. : helminthology, ectoparasites of sheep.                                   | 19, 21        |
|     | Miss P. M. Sambell, B.A. : helminthology.  | 21            |
|     | Miss H. B. Esserman, B.Sc. : biochemistry.   | 25            |
| (d) | WOOL BIOLOGY LABORATORY,<br>17 Randle Street, Sydney, New South Wales (Tel. : MA.9606).            |               |
|     | H. B. Carter, B.V.Sc., <i>Officer in Charge</i> : wool biology.                                    | 1, 13         |
|     | Miss M. H. Hardy, M.Sc., Ph.D. (Cantab.) : wool biology, tissue culture.                           | 13            |
|     | K. A. Ferguson, B.V.Sc. : wool biology.  | 13            |
|     | Miss P. Davidson, B.Sc. : wool biology.  | 13            |
|     | A. A. Dunlop, M.Agr.Sc., Ph.D. : sheep breeding.   | 14            |
| (e) | FLEECE ANALYSIS LABORATORY,<br>Villawood, New South Wales (Tel. : U.B. 1315).                      |               |
|     | N. F. Roberts, M.Sc., <i>Officer in Charge</i> : fleece analysis, wool metrology.                  | 1, 18         |
|     | L. T. Wilson, B.Sc. : fleece analysis, wool metrology.   | 18            |
| (f) | REGIONAL PASTORAL LABORATORY<br>Armidale, New South Wales. (Tel. : Armidale 521).                  |               |
|     | I. L. Johnstone, B.V.Sc., <i>Officer in Charge</i> : parasitology, animal production.              | 1, 17, 19, 21 |
|     | J. F. Barrett, B.V.Sc. : lambing mortality, animal production.                                     | 13, 17        |
|     | W. H. Southcott, B.V.Sc. : helminthology (field studies) animal behaviour.                         | 18, 21        |
| (g) | McMASTER FIELD STATION<br>Badgery's Creek, New South Wales (Tel. : Badgery's Creek 7.)             |               |
|     | R. B. Kelley, D.V.Sc., <i>Officer in Charge</i> : animal breeding and production.                  | 1, 14, 17     |
|     | W. A. Beattie, B.A., LL.B. (N.Z.), B.A. (Cantab.) : beef cattle production.                        | 17            |
|     | J. H. Riches, B.Sc. (Agr.), Ph.D. : wool production.   | 17            |
|     | R. H. Hayman, B.Agr.Sc. : sheep and cattle breeding.   | 14, 17        |
|     | J. A. Morris, B.Sc.Agr. : animal breeding, statistics  | 14, 29        |
|     | D. F. Dowling, B.V.Sc., B.Sc., Ph.D. : beef cattle breeding.                                       | 14            |
| (h) | VETERINARY PARASITOLOGY LABORATORY<br>Fairfield Road, Yeerongpilly, Queensland. (Tel. : JY. 4581). |               |
|     | F. H. S. Roberts, D.Sc., <i>Officer in Charge</i> : parasitology.                                  | 1, 19, 21     |
|     | P. H. Durie, M.Sc. : internal parasites of cattle.   | 21            |
|     | R. S. Riek, B.V.Sc. : entomology, pathology.   | 16, 19        |



- (i) at ANIMAL HEALTH AND NUTRITION LABORATORY  
Smyth Road, Nedlands, Western Australia. (Tel. : W.1990).  
A. B. Beck, M.Sc. : copper deficiency, endocrinology. 25
- (j) NATIONAL FIELD STATION  
"Gilruth Plains," Cunnamulla, Queensland. (Tel. : Cunnamulla 167).  
J. F. Kennedy, M.Agr.Sc. : *Officer in Charge* : sheep breeding investigations. 1, 14
- (k) at C.S.I.R.O. FOOD PRESERVATION RESEARCH LABORATORY  
Cannon Hill, Queensland. (Tel. : JY.1001).  
N. T. M. Yeates, B.Sc.Agr., Ph.D. : animal physiology, carcase appraisal. 13, 17

## 2. Division of Entomology

- P.O. Box 109, Canberra City, A.C.T. (Tel. : Canberra 644).  
A. J. Nicholson, D.Sc., *Chief of the Division*. 19  
I. F. B. Common, M.A., B.Agr.Sc., *Technical Secretary*. 19  
F. Wilson, *Senior Research Officer* : biological control of insect pests and noxious weeds. 19  
T. G. Campbell, *Research Officer* : museum and biological control. 19  
S. J. Paramonov, D.Sc., *Senior Research Officer* : taxonomy. 19  
E. F. Riek, M.Sc., *Research Officer* : biological control and taxonomy. 19  
D. F. Waterhouse, M.Sc., A.A.C.I., *Senior Research Officer* : insect physiology, toxicology. 19, 25  
M. F. Day, B.Sc., Ph.D., *Senior Research Officer* : insect physiology and toxicology. 19, 25  
D. Gilmour, M.Sc., *Senior Research Officer* : insect physiology and toxicology. 19, 25  
R. H. Hackman, M.Sc., Ph.D. (seconded from Division of Industrial Chemistry), *Research Officer* : insecticides, toxicology. 19, 24  
R. F. Powning, A.S.T.C., A.A.C.I., *Research Officer* : insecticides, toxicology. 19, 24  
R. W. Kerr, B.Sc., *Research Officer* : insecticides. 19  
K. R. Norris, M.Sc., *Senior Research Officer* : sheep blowfly investigations. 19  
K. H. L. Key, D.Sc., *Senior Research Officer* : locusts and pasture pests. 19  
P. B. Carne, B.Agr.Sc., *Research Officer* : pasture pests. 19  
F. J. Gay, B.Sc., D.I.C., *Research Officer* : termites and forest insects. 19  
T. Greaves, *Research Officer* : vegetable pest control, ants. 19

### AT YEERONGPILLY, QUEENSLAND

- L. F. Hitchcock, M.Sc., *Senior Research Officer* : cattle tick. 19  
W. J. Roulston, B.Sc., *Research Officer* : insecticides. 19  
G. J. Snowball, B.Sc., *Research Officer* : cattle tick ecology. 19

## At BRIGHT, VICTORIA.

|   |    |
|---|----|
| L. R. Clark, M.Sc., <i>Senior Research Officer</i> : ecology biological control of weeds. | 19 |
| N. Clark, B.Sc.Agr., <i>Research Officer</i> : ecology, biological control of weeds.      | 19 |

## In WESTERN AUSTRALIA

|   |    |
|---|----|
| M. M. H. Wallace, B.Sc., <i>Research Officer</i> : earth mite investigations. | 19 |
|---|----|

**3. Division of Plant Industry**

P.O. Box 109, Canberra City, A.C.T. (Tel. : Canberra 644).

|  |   |
|--|---|
| B. T. Dickson, B.A., Ph.D., <i>Chief of the Division</i> . | 1 |
| W. Ives, M.Ec., <i>Technical Secretary</i> .               |   |

## AGROSTOLOGY SECTION

## At CANBERRA.

|   |    |
|---|----|
| J. Griffiths Davies, B.Sc., Ph.D., <i>Senior Principal Research Officer</i> : in charge pasture and weed research.  | 8  |
| C. S. Christian, M.Sc., <i>Principal Research Officer</i> : in charge of surveys of agricultural resources of tropical Australia and research on cattle pastures. | 8  |
| C. M. Donald, M.Agr.Sc., <i>Principal Research Officer</i> : in charge of research on sheep pastures, southern Australia.   | 8  |
| C. G. Greenham, M.Sc., <i>Senior Research Officer</i> : in charge of physiology of weeds.   | 3  |
| R. M. Moore, B.Sc.Agr., <i>Senior Research Officer</i> : in charge of ecological and field research on weeds.   | 12 |
| A. J. Anderson, B.Sc.Agr., <i>Senior Research Officer</i> : pasture plant nutrition with special reference to soil deficiencies.                                  | 2  |
| W. M. Willoughby, B.Agr.Sc., <i>Research Officer</i> : sown pastures.   | 8  |
| C. W. E. Moore, B.Agr.Sc., <i>Research Officer</i> : ecology and pasture surveys.   | 8  |
| K. D. McLachlan, B.Agr.Sc., <i>Research Officer</i> : pastures and land use studies.  | 8  |
| E. F. Biddiscombe, B.Agr.Sc., <i>Research Officer</i> : management of natural pastures.   | 8  |
| R. A. Perry, B.Sc., <i>Research Officer</i> : ecology and pasture surveys   | 8  |
| P. Goldacre, B.Sc., <i>Research Officer</i> : biochemistry of weed-killers.   | 25 |
| D. Spencer, B.Sc., <i>Research Officer</i> : biochemistry of plant nutrition.   | 25 |

## At BRISBANE and at COOPER LABORATORY,

Lawes, Queensland.

|   |   |
|---|---|
| T. B. Paltridge, B.Sc., <i>Senior Research Officer</i> : in charge of pasture investigations ; row cultivation of pastures. | 8 |
| N. H. Shaw, B.Agr.Sc., <i>Research Officer</i> : beef cattle pastures.  | 8 |
| W. J. Bissett, Q.D.D., B.Agr.Sc., <i>Research Officer</i> : beef cattle pastures, weed control.                             | 8 |
| E. H. Kipps, B.Sc., <i>Research Officer</i> : pasture chemistry.  | 5 |
| Helen Barford, B.Sc., <i>Research Officer</i> : plant nutrition studies.  | 2 |

## At UNIVERSITY OF WESTERN AUSTRALIA,

Perth, W.A.

R. C. Rossiter, B.Agr.Sc., *Senior Research Officer* : sown pastures. 8

## At KOJONUP, W.A.

H. L. Pennington, B.Agr.Sc., *Research Officer* : sown pastures. 8

## At REGIONAL PASTORAL LABORATORY,

Deniliquin, N.S.W.

R. W. Prunster, B.Sc.Agr., *Senior Research Officer* : *Officer-in-Charge*. 8A. L. Tisdall, M.Agr.Sc., *Senior Research Officer* : water relationships of irrigated pasture and crops. 8O. B. Williams, B.Agr.Sc., *Research Officer* : ecology and management of dryland pastures. 8

## At REGIONAL PASTORAL LABORATORY,

Armidale, N.S.W.

R. Roe, B.Agr.Sc., *Senior Research Officer* : ecology. 8

and management of summer rainfall natural pastures.

E. J. Hilder, B.Agr.Sc., *Research Officer* : sown pastures. 8

## HOST-PATHOGEN STUDIES

## At CANBERRA

H. R. Angell, O.B.E., B.Sc.Agr., M.S., Ph.D., *Principal Research Officer* : take-all of wheat ; chemical composition of soil in relation to plant disease. 6

## MICROBIOLOGY SECTION

## At CANBERRA

D. O. Norris, D.Sc. (Agr.), *Senior Research Officer* : virus diseases of tomato and potato. 22W. V. Ludbrook, B.Sc.Agr., M.S., Ph.D., *Senior Research Officer* : fungal diseases of potatoes ; nutritional studies on Pinus. 6J. H. E. Mackay, B.Sc.Agr., *Research Officer* : Fusarium wilt of tomatoes ; antibiotics in plant disease control. 6Margaret Mills, B.Sc., *Research Officer* : late blight of potatoes. 6Katie Helms, B.Sc., *Research Officer* : witch's broom of lucerne. 22

## PLANT INTRODUCTION SECTION

## At CANBERRA

W. Hartley, B.A., Dip.Agr., *Principal Plant Introduction Officer* : introduction and trial of pasture and crop plants. 3C. A. Neal Smith, B.Agr.Sc., *Research Officer* : agronomic trials of introduced plants. 3Nancy T. Burbidge, M.Sc., *Research Officer* : systematic botany. 3

## At BRISBANE

J. F. Miles, B.Agr.Sc., *Senior Research Officer* : agronomic trials of introduced plants. 3



## At PERTH

- E. T. Bailey, B.Sc., *Research Officer* : agronomic trials of introduced plants. 3

## At COOPER LABORATORY, LAWES, QUEENSLAND

- S. G. Gray, B.Sc.Agr., *Research Officer* : agronomic trials of introduced plants. 3

## HORTICULTURE AND DRUG PLANTS SECTION

## At CANBERRA

- C. Barnard, D.Sc., *Principal Research Officer* : general botany, fruit, medicinal plants. 9  
 K. Loftus Hills, M.Agr.Sc., *Senior Research Officer* : medicinal plants. 4  
 Cynthia Rodwell, M.Sc., *Research Officer* : chemistry of medicinal plants, alkaloids. 5

## At HOBART, TASMANIA

- D. Martin, B.Sc., *Senior Research Officer* : fruit investigations, cool storage. 9

## At STANTHORPE, QUEENSLAND

- L. A. Thomas, M.Sc., *Senior Research Officer* : fruit investigations, stocks and scions. 9  
 R. A. Colbran, B.Agr.Sc., *Research Officer* : fruit investigations, stocks and scions. 9

## At BRISBANE, QUEENSLAND

- L. J. Webb, *Research Officer* : systematic botany, medicinal plants. 3

## VEGETABLE SECTION

## At CANBERRA

- E. M. Hutton, B.Agr.Sc., M.Sc., *Senior Research Officer* : genetics of virus resistance. 4  
 D. C. Wark, M.Agr.Sc., *Research Officer* : genetics of disease resistance in peas. 4  
 R. D. Brock, B.Agr.Sc., *Research Officer* : genetics of disease resistance in tomato, potato, onion. 4

## TOBACCO SECTION

## At CANBERRA

- A. V. Hill, M.Agr.Sc., *Principal Research Officer* : *Officer-in-Charge* ; tobacco diseases. 6  
 R. Johanson, B.Sc., *Research Officer* : chemistry of tobacco. 5

## At AYR, QUEENSLAND

- T. G. Haney, B.Sc.Agr., *Research Officer* : genetics and plant breeding. 4  
 W. J. Lovett, B.Agr.Sc., *Research Officer* : irrigation investigations. 12

## PLANT PHYSIOLOGY SECTION

## At CANBERRA

J. Calvert, D.Sc., F.L.S., *Research Officer* : plant physiology. 3

## At ADELAIDE, SOUTH AUSTRALIA

L. A. T. Ballard, M.Agr.Sc., Ph.D., *Principal Research Officer* :  
plant physiology. 3

## KATHERINE EXPERIMENT STATION, NORTHERN TERRITORY

W. Arndt, B.Agr.Sc., *Research Officer* : crop and pasture investigations. 12

**4. Division of Biochemistry and General Nutrition**

The University, Adelaide, South Australia. (Tel : Central 6778).

Miss S. H. Allen, B.Sc., A.A.C.I. : biochemistry ; proteins. 25

J. E. Coaldrake, B.Sc. : plant nutrition. 3

Miss M. C. Dawbarn, M.Sc. : accessory food factors. 15

D. W. Dewey : biochemical analyses. 15

F. V. Gray, M.Sc. : microbiology. 15

I. G. Jarrett, M.Sc., A.A.C.I. : animal physiology. 13

G. B. Jones, M.Sc., A.R.I.C., A.A.C.I. : chemical analyses. 24

R. H. Jones, R.D.A. : farm management. 18

H. J. Lee, M.Sc. : field experiments. 15

E. W. Lines, B.Sc. : animal nutrition. 15

H. R. Marston, F.R.S., F.A.C.I., *Chief of Division* : ruminant  
physiology, energetics, minor element deficiencies. 15

Miss P. M. Macbeth, B.Sc. : microbiological analysis. 15

A. W. Peirce, D.Sc., F.A.C.I. : fluorine toxicosis, vitamin A. 15

A. F. Pilgrim, B.Sc. : microbiology. 15

B. J. Potter, B.Sc., A.A.C.I. : animal physiology. 13

J. K. Powrie, B.Sc. (Agr.) : plant nutrition. 2

T. A. Quinlan-Watson, M.Sc. : tissue metabolism. 15

D. S. Riceman, M.Sc., B.Ag.Sc. : plant nutrition. 2

H. J. Rodda, Ph.D., M.Sc., A.A.C.I. : organic chemistry. 24

R. M. Smith, B.Sc. : chemical analyses. 24

R. E. Underdown, A.S.A.S.M. : gas analyses. 24

R. A. Weller, B.Sc., A.A.C.I. : chemical analyses. 24

**5. Division of Soils**

Waite Agricultural Research Institute, Adelaide, South  
Australia. (Tel : UA 1191).

J. K. Taylor, B.A., M.Sc., B.Sc.Agr., *Chief* : land utilisation ;  
irrigation ; pedology. 1, 2

## SOIL SURVEY AND PEDOLOGY SECTION

C. G. Stephens, M.Sc., *Principal Research Officer* : pedology ;  
soil erosion. 2

G. D. Hubble, B.Ag.Sc., *Senior Research Officer*, Brisbane,  
Queensland. 2

|   |   |
|---|---|
| R. Smith, B.Sc.Agr., <i>Senior Research Officer</i> , Perth, Western Australia. | 2 |
| B. E. Butler, B.Sc.Agr., <i>Senior Research Officer</i> , Deniliquin, N.S.W.    | 2 |
| R. G. Downes, M.Ag.Sc., <i>Senior Research Officer</i> , Canberra, A.C.T.       | 2 |
| E. J. Johnston, B.Sc.Agr., <i>Research Officer</i> .                            | 2 |
| R. Brewer, B.Sc., <i>Research Officer</i> .                                     | 2 |
| K. D. Nicolls, B.Sc., B.Ag.Sc., <i>Research Officer</i> .                       | 2 |
| K. H. Northcote, B.Ag.Sc., <i>Research Officer</i> .                            | 2 |
| G. A. Stewart, B.Ag.Sc., <i>Research Officer</i> .                              | 2 |
| G. Blackburn, B.Ag.Sc., <i>Research Officer</i> .                               | 2 |
| T. Langford-Smith, M.Sc., <i>Research Officer</i> (Seconded)                    | 2 |
| J. H. Sleeman, B.A.Sc., <i>Research Officer</i> .                               | 2 |
| E. W. Boehm, B.S.Agr., <i>Research Officer</i> .                                | 2 |
| W. I. Nankivell, B.Ag.Sc., <i>Research Officer</i> .                            | 2 |
| G. M. Dimmock, B.Sc., <i>Research Officer</i> .                                 | 2 |

## SOIL CHEMISTRY SECTION

|  |       |
|--|-------|
| C. S. Piper, D.Sc., <i>Senior Chemist</i> .                        | 2, 24 |
| A. C. Oertel, M.Sc., <i>Research Officer</i> .                     | 2, 24 |
| H. C. T. Stace, B.Sc., <i>Research Officer</i> .                   | 2, 24 |
| B. M. Tucker, B.Sc., <i>Research Officer</i> .                     | 2, 24 |
| J. T. Hutton, B.Sc., <i>Research Officer</i> .                     | 2, 24 |
| R. S. Beckwith, B.Sc., <i>Research Officer</i> .                   | 2, 24 |
| A. E. Martin, B.Sc. (Reading), F.R.I.C., <i>Research Officer</i> . | 2, 24 |
| A. G. Turton, B.Sc., <i>Research Officer</i> .                     | 2, 24 |
| R. E. Shapter, <i>Research Officer</i> .                           | 5, 24 |

## SOIL PHYSICS AND MECHANICS SECTION

|  |   |
|--|---|
| T. J. Marshall, M.Ag.Sc., Ph.D., <i>Principal Research Officer</i> . | 2 |
| G. D. Aitchison, B.E., <i>Research Officer</i> : soil mechanics.     | 2 |
| G. B. Stirk, B.Sc., <i>Research Officer</i> .                        | 2 |
| J. P. Quirk, B.Sc.Agr., <i>Research Officer</i> .                    | 2 |
| C. G. Gurr, B.Sc., <i>Research Officer</i> .                         | 2 |
| K. Norrish, B.Sc., <i>Research Officer</i> : X-ray investigations    | 2 |

## SOIL MICROBIOLOGY SECTION

|   |   |
|---|---|
| Miss M. P. Thomas, Ms.D., <i>Research Officer</i> . | 2 |
| J. R. Harris, B.Sc., <i>Research Officer</i> .      | 2 |

## OENOLOGICAL RESEARCH

|   |    |
|---|----|
| Waite Agricultural Research Institute, Adelaide, South Australia.     |    |
| J. C. M. Fornachon, B.Ag.Sc., M.Sc., <i>Senior Research Officer</i> . | 22 |
| W. K. Joklik, B.Sc., <i>Research Officer</i> .                        | 22 |

## 6. (a) Commonwealth Research Station

|   |         |
|---|---------|
| Merbein, Victoria. (Irrigation and Viticulture). (Tel. Merbein 86).   |         |
| A. V. Lyon, M.Ag.Sc., <i>Officer in Charge, Senior Principal Research Officer</i> : irrigation ; soil reclamation ; viticulture.                    | 1, 2, 9 |
| E. C. Orton, B.Sc., A.I.B., <i>Principal Research Officer</i> : dried fruit processing ; preservation and transport ; minor element investigations. | 2, 30   |



|   |           |
|---|-----------|
| J. G. Baldwin, B.Agr.Sc., B.Sc., <i>Senior Research Officer</i> : soil chemistry ; soil survey.                         | 2         |
| G. V. F. Clewett, B.E., <i>Research Officer</i> : irrigation engineering.   | 28        |
| W. J. Webster, B.Sc., <i>Research Officer</i> : vine growth studies ; weed control ; entomology.                        | 9, 12, 19 |
| S. F. Bridley, B.Agr.Sc., <i>Research Officer</i> : irrigation soil physics.  | 2         |
| A. J. Antcliff, B.Sc., <i>Research Officer</i> : vine growth studies ; plant physiology.                                | 3, 9      |
| M. R. Sauer, B.Sc.Agr., <i>Research Officer</i> : citrus growth studies ; mineral deficiencies of horticultural plants. | 2, 9      |
| D. M. Alexander, B.Sc., <i>Research Officer</i> : nitrogen status of soils under irrigation.                            | 2         |
| R. C. Woodham, B.Agr.Sc., <i>Research Officer</i> : injurious salts in irrigated soils.                                 | 2         |

**(b) Irrigation Research Station**

Griffith, New South Wales. (Tel. : Nos. Hanwood, 7, 16, 124, 126).

|  |    |
|--|----|
| E. S. West, M.Sc., <i>Senior Principal Research Officer, Officer in Charge</i> : soil and irrigation investigations. | 1  |
| N. G. Cassidy, M.Sc., A.A.C.I., <i>Senior Research Officer</i> : soil chemistry.                                     | 2  |
| R. F. Williams, M.Sc., <i>Senior Research Officer</i> : plant physiology.  | 3  |
| C. T. Gates, B.Sc. (Hons.), <i>Research Officer</i> : plant physiology.  | 3  |
| O. Perkman, B.Sc.Agr., <i>Research Officer</i> : irrigation.   | 2  |
| V. J. Wagner, B.Ag.Sc., <i>Research Officer</i> : drainage.  | 2  |
| K. Spencer, B.Sc.Agr., <i>Research Officer</i> : vegetable agronomy.   | 2  |
| E. L. Greacen, B.Sc.Agr., <i>Research Officer</i> : soil physics.  | 2  |
| H. J. Frith, B.Sc.Agr., <i>Research Officer</i> : horticulture.  | 9  |
| L. F. Myers, B.Agr.Sc., <i>Research Officer</i> : weeds (an officer of C.S.I.R.O. Division of Plant Industry).       | 12 |
|  | 12 |

**(c) Dairy Products Research Station**

Lorimer Street, Fishermen's Bend, S.C.8., Victoria. (Tel. : MX 5251).

|  |        |
|--|--------|
| G. Loftus Hills, B.Agr.Sc., <i>Officer in Charge</i> .     | 1, 24  |
| E. G. Pont, M.Sc. (Agr.), <i>Senior Research Officer</i> . | 22, 24 |
| J. Conochie, B.Sc. (Agr.), <i>Research Officer</i> .       | 24     |
| A. J. Lawrence, B.Sc., <i>Research Officer</i> .           | 24     |
| D. A. Forss, M.Sc., <i>Research Officer</i> .              | 24, 25 |

**7. Division of Forest Products**

Yarra Bank Road, South Melbourne, S.C.4., Victoria. (Tel. : M.X.5831).

|  |                    |
|--|--------------------|
| S. A. Clarke, B.E., <i>Chief of Division</i> .               | 1, 11              |
| C. S. Elliot, B.Sc., <i>Assistant to Chief of Division</i> . | 11                 |
| *K. L. Cooper, M.A., B.Sc. (Oxon.), B.Sc. (W.A.)             | } timber mechanics |
| J. D. Boyd, M.C.E.   |                    |
| N. H. Kloot, B.Sc.   |                    |
| R. G. Pearson, B.C.E.  |                    |
| *R. S. T. Kingston, B.Sc., B.E.                              | } timber physics.  |
| L. N. Clarke, B.Eng.Sc.                                      |                    |
| Miss K. E. Kelsey, B.Sc.                                     |                    |

|   | Subject                              |
|---|--------------------------------------|
| *N. Tamblyn, M.Sc. (Agric).                               | } timber preservation 11             |
| G. W. Tack, B.Ag.Sc.                                      |                                      |
| G. N. Christensen, B.Sc.                                  |                                      |
| E. W. B. Da Costa, M.Agr.Sc.                              |                                      |
| *G. W. Wright, B.E.                                       | } timber seasoning 11                |
| J. W. Gottstein, B.Sc.                                    |                                      |
| C. V. Lansell, B.Eng.Sc.                                  |                                      |
| E. L. Ellwood, B.Sc. (For.)                               |                                      |
| *R. F. Turnbull, B.E.                                     | } timber utilization 11              |
| C. E. Dixon, M.Sc.  |                                      |
| C. H. Hebbelthwaite, Dip.For. (Canberra)                  |                                      |
| A. E. Head, B.Sc.   |                                      |
| *A. Gordon, B.Sc.   | } veneer and gluing 11               |
| H. G. Higgins, B.Sc.                                      |                                      |
| K. F. Plomley, B.Agr.Sc.                                  |                                      |
| *W. E. Cohen, D.Sc.                                       | } wood chemistry ; pulp and paper 11 |
| D. E. Bland, M.Sc.  |                                      |
| A. J. Watson, A.M.T.C.                                    |                                      |
| Miss C. M. Emery, B.Sc.                                   |                                      |
| C. M. Stewart, B.Sc.                                      |                                      |
| D. H. Foster, M.Sc.                                       | } wood structure 11                  |
| *H. E. Dadswell, D.Sc., <i>Asst. to Chief of Division</i> |                                      |
| H. D. Ingle, B.For.Sc.                                    |                                      |
| Miss M. M. Chattaway, B.A., B.Sc., D.Phil.                |                                      |
| A. B. Wardrop, M.Sc., Ph.D.                               |                                      |
| I. J. W. Bisset, B.Sc.                                    |                                      |
| G. L. Amos, M.Sc.   |                                      |

### 3. Division of Food Preservation and Transport

|  |        |
|--|--------|
| Abattoir, Homebush Bay, Sydney, N.S.W. (Private Bag, Homebush P.O., N.S.W.). (Tel. : UM 8431, UM 6782).                                  |        |
| J. R. Vickery, M.Sc., Ph.D., <i>Chief of Division</i> : handling and storage of eggs.  | 1, 30  |
| N. E. Holmes, B.E.E., M.Mech.E., <i>Senior Research Officer</i> (in London) ; refrigerated transport.                                    | 30     |
| E. W. Hicks, B.A., B.Sc., <i>Principal Research Officer</i> : physical problems of storage.  | 30     |
| M. C. Taylor, M.Sc., <i>Research Officer</i> : physical problems of storage.   | 30     |
| G. M. Rostos, B.E. (Karlsruhe), <i>Research Officer</i> : engineering problems of processing and storage.                                | 30     |
| A. R. Riddle, B.A., M.Sc., <i>Senior Research Officer</i> (in Brisbane) : storage of meat.   | 30     |
| F. E. Huelin, B.Sc., Ph.D., <i>Senior Research Officer</i> : chemistry of changes in fruit and vegetables during processing and storage. | 5, 30  |
| H. A. McKenzie, M.Sc., <i>Research Officer</i> : physical chemistry of food preservation.  | 24, 30 |
| Adrienne R. Thompson, M.Sc., <i>Research Officer</i> : problems of organic chemistry of stored fruit.                                    | 24, 30 |

\* Officer in Charge of sectional investigations.

|   |         |
|---|---------|
|   | Subject |
| R. N. Robertson, B.Sc., Ph.D., <i>Principal Research Officer</i> : physiological problems of storage of fresh fruit and vegetables. | 3, 30   |
| E. G. Hall, B.Sc.Agr., <i>Research Officer</i> : storage of fresh fruit and vegetables.   | 30      |
| J. F. Turner, M.Sc., <i>Research Officer</i> : biochemical problems of fruit storage.   | 25, 30  |
| W. J. Scott, B.Agr.Sc., <i>Principal Research Officer</i> : general bacteriology of foods.  | 30      |
| M. R. J. Salton, B.Sc.Agr., <i>Research Officer</i> : bacteriology of foods.  | 30      |
| L. J. Lynch, B.Sc.Agr., <i>Principal Research Officer</i> : canning of fruit and vegetables.  | 30      |
| R. S. Mitchell, M.Agr.Sc., <i>Research Officer</i> : canning of fruit and vegetables.   | 30      |
| J. F. Kefford, M.Sc., <i>Research Officer</i> : chemistry of fruit products.  | 24, 30  |
| B. V. Chandler, B.Sc., <i>Research Officer</i> : chemistry of fruit products  | 24, 30  |
| W. A. Empey, B.V.Sc., <i>Senior Research Officer</i> : preservation of fish.  | 30      |
| Thelma M. Reynolds, M.Sc., D.Phil., <i>Senior Research Officer</i> : dehydrated fruit and vegetables.                               | 24, 30  |
| A. Howard, M.Sc., <i>Senior Research Officer</i> : dehydrated foods.  | 30      |
| H. S. McKee, B.A., D.Phil., <i>Research Officer</i> : plant physiology.   | 3, 30   |
| D. McG. McBean, B.Sc., <i>Research Officer</i> : processing and storage of dehydrated fruit and vegetables.                         | 30      |
| J. Shipton, B.Agr.Sc., <i>Research Officer</i> : processing and storage of dehydrated fruit and vegetables.                         | 30      |
| A. R. Prater, B.Agr.Sc., <i>Research Officer</i> : processing and storage of dehydrated meat.                                       | 30      |
| W. G. Murrell, B.Agr.Sc., <i>Research Officer</i> : bacteriology of foods.  | 30      |
| B. T. Overell, M.Sc., <i>Research Officer</i> : mycology of foods.  | 20, 30  |
| Marjorie J. Wilkins, B.Sc., <i>Research Officer</i> : plant physiology.   | 3, 30   |
| Judith A. Fraser, B.Sc., <i>Research Officer</i> : plant physiology.  | 3, 30   |
| A. D. Brown, B.Sc., <i>Research Officer</i> : bacteriology of foods.  | 30      |

## B.—DEPARTMENT OF THE INTERIOR

### Forestry and Timber Bureau

|  |          |
|--|----------|
| Canberra, A.C.T. (Tel. : F.433)  |          |
| G. J. Rodger, B.Sc. (For.), <i>Director General</i> (Present Location—Melbourne, Tel. : MB.1741)       | 1        |
| M. R. Jacobs, M.Sc., Dr.Ing., Ph.D., Dip.For., <i>Principal, Australian Forestry School, Canberra.</i> | 3, 10    |
| C. E. Carter, B.Agr.Sc., M.F., Dip.Ed., <i>Senior Lecturer, Australian Forestry School.</i>            | 3        |
| A. D. Helms, M.D., F.F. (Copenhagen), <i>Lecturer, Australian Forestry School.</i>                     | 10       |
| K. P. McGrath, Dip.For., <i>Lecturer, Australian Forestry School.</i>                                  | 11       |
| Mrs. F. E. Calvert, M.A., Dip.Ed., <i>Consultant Biometrician and Lecturer</i>                         | 29       |
| J. M. Fielding, B.Sc., Dip.For., <i>Research Officer.</i>  | 3, 4, 10 |
| C. D. Hamilton, B.Sc., Dip.For., <i>Research Officer.</i>  | 3        |



# COMMONWEALTH OF AUSTRALIA

|  |               |
|--|---------------|
| M. R. O. Millett, B.A., <i>Research Officer.</i>   | Subject<br>26 |
| D. I. Nicholson, B.Sc. (For.), Dip.For., <i>Research Officer.</i>  | 4             |
| H. R. Gray, M.A., Dip.For. (Oxon.), M.Sc., <i>Officer in Charge, Division of Imports, Exports, Statistics and Programming</i> (Present Location—Melbourne) | 11, 27        |
| D. A. N. Cromer, M.Sc., Dip.For., <i>Officer in Charge, Division of Forest Resources and Timber Production</i> (Present Location—Sydney, Tel. : B.0531).   | 1, 10, 11     |
| N. Hall, B.Sc. (For.), <i>Senior Technical Officer, Division of Forest Resources and Timber Production.</i>  | 10, 11        |
| C. K. Pawsey, Dip.For., <i>Research Officer</i> (Located at Mt. Burr, South Australia).  | 10            |
| P. J. Bowling, B.For., Dip.For., <i>Research Officer</i> (Located at Launceston, Tasmania).  | 10            |

## C.—COMMONWEALTH DEPARTMENT OF HEALTH

### 1. At Canberra A.C.T. (Tel. : 596).

#### (a) Division of Plant Quarantine

T. H. J. Harrison, D.Sc.Agr., D.I.C., *Director.*

In all States there is a Chief Quarantine Officer (Plants) who is an officer of the Department of Agriculture.

#### (b) Division of Veterinary Hygiene (Animal Quarantine)

R. N. Wardle, B.V.Sc., *Director.*

K. S. McIntosh, B.V.Sc., H.D.A., *Assistant Director.*

H. R. Seddon, D.V.Sc., *Research Veterinarian.*

H. R. Peisley, B.V.Sc., *Veterinary Officer.*

In all States the principal Veterinary Officer is the Chief Quarantine Officer (Animals).

### 2. At Commonwealth Serum Laboratories

Parkville N.2. Victoria. (Tel. : F.W.2101)

D. T. Oxe, D.V.Sc., *Senior Veterinary Research Officer.*

P. L. Bazeley, B.V.Sc., *Veterinary Research Officer.*

## D.—DEPARTMENT OF COMMERCE AND AGRICULTURE

Canberra, A.C.T. (Tel. : 587).

### 1. Division of Agricultural Production

F. W. Bulcock, *Director General of Agriculture.* 1

W. C. Duggan, B.Sc.Agr., *Supervisor, Agricultural Production Section.* 2, 7

A. G. Edmonds, B.Agr.Sc., *Agricultural Officer (Administration).* 26, 29

P. T. Mitchell, B.Agr.Sc., *Agricultural Officer : fertilisers, chemicals.* 2, 24

K. Ewart, B.Com., *Officer in Charge, Farm Mechanisation Branch.* 28

W. G. Laffan, H.D.D., *Investigation Officer : animal production (dairying).* 17

G. J. Harvey, B.Sc., B.Sc.Agr., *Investigation Officer : horticulture.* 3, 9

**2. Fruit and Vegetable Export**

|  |       |
|--|-------|
| W. M. Carne, <i>Supervisor, Fresh Fruit and Vegetable Exports</i> : export problems.           | 9, 30 |
| W. J. Bettenay, B.Sc. (Agric.), <i>Fruit Inspector and Research Officer</i> : export problems. | 9, 30 |
| J. C. Walsh, B.Agr.Sc., <i>Fruit Inspector and Research Officer</i> : export problems.         | 9, 30 |

**3. Bureau of Agricultural Economics**

(Tel. : 501).

|  |        |
|--|--------|
| J. G. Crawford, M.Ec., <i>Director</i> . | 1, 27  |
| T. H. Strong, M.Sc. (Agr.)               | 27     |
| G. P. Phillips, B.Sc. (Agr.)             | 27     |
| F. O. Grogan, B.A., M.Sc.Agr.            | 27     |
| W. D. Hardy, B.Sc. (Agr.)                | 27     |
| P. A. Reid, M.Agr.Sc.                    | 27     |
| J. N. Lewis, B.Ec.                       | 27, 29 |
| A. C. B. Maiden, B.A.                    | 27     |
| H. C. Clark, B.A.                        | 27     |
| J. H. Kelly,                             | 27     |
| R. A. Sherwin, B.Agr.Sc.                 | 27     |
| K. M. Fraser, M.Agr.Sc.                  | 27     |
| R. B. McMillan, B.Com.                   | 27     |
| E. A. Saxon, B.Com.                      | 27     |
| E. S. Hoffman, B.Agr.Sc.                 | 27, 29 |
| L. White, B.A.                           | 27     |
| I. MacFarlane, B.Sc. (Agr.).             | 27     |
| G. M. Percival, B.A., B.Com.             | 27     |
| W. D. N. Johnson, B.Com.                 | 27     |
| B. Fernon, B.Ec.                         | 27     |

**E.—DEPARTMENT OF EXTERNAL TERRITORIES**

Territory of Papua—New Guinea.

**Department of Agriculture, Stock and Fisheries**

Port Moresby. (Tel. : Moresby 109)

|   |   |
|---|---|
| W. Cottrell-Dormer, M.Sc.Ag., <i>Director of Agriculture</i> .        | 1 |
| R. E. P. Dwyer, B.Sc.Ag., H.D.A., H.D.D., <i>Assistant Director</i> . | 1 |

**Division of Agricultural Extension**

|   |               |
|---|---------------|
| C. C. Marr, H.D.A., <i>Acting Chief of Division</i> .                                     | 1             |
| W. L. Conroy, B.Sc.Ag., <i>Agricultural Officer, Madang</i> .                             | 2, 4, 6, 7, 9 |
| L. A. Bridgland, B.Sc.Ag., D.T.A. (Trinidad), <i>Agricultural Officer, Port Moresby</i> . | 2, 4, 6, 7, 9 |
| G. K. Graham, B.Sc.Ag., <i>Student at Trinidad</i> .                                      |               |
| R. S. Carne, B.Sc.Ag., <i>Overseas Student</i> .  |               |
| Miss M. P. Eggleston, B.Sc.Ag., <i>Agricultural Officer, Port Moresby</i> .               | 2, 4, 6, 7, 9 |
| J. R. Vicary, D.D.A., <i>Agricultural Officer, Port Moresby</i> .                         | 2, 4, 6, 7, 9 |
| G. D. Mills, B.Sc.Ag., <i>Agricultural Officer, Port Moresby</i> .                        | 27, 29        |
| T. Sorenson, B.Sc.Ag., <i>Agricultural Officer, Port Moresby</i> .                        | 2, 4, 6, 7, 9 |
| J. C. Lamrock, B.Sc.Ag., <i>Agricultural Officer, Mekeo</i> .                             | 2, 4, 6, 7    |
| E. Henty, B.Sc.Ag., <i>Agricultural Officer, Lae</i> .                                    | 2, 4, 6, 7, 9 |

**Division of Animal Industry**

|  |                |
|--|----------------|
| W. Granger, B.V.Sc., <i>Chief of Division.</i>       | 1              |
| J. Marley, B.V.Sc., <i>Animal Husbandry Officer.</i> | 14, 15, 16, 17 |
| Miss O. MacPherson, B.V.Sc., <i>Parasitologist.</i>  | 21, 22         |

**Division of Plant Industry**

|  |      |
|--|------|
| F. C. Henderson, B.Sc.Ag., <i>Economic Botanist, Lowlands Agricultural Experiment Station, Keravat, New Britain.</i> | 4    |
| A. J. Schindler, B.Sc.Ag., Q.D.D., <i>Manager, Highlands Experimental Station, Aiyura via Lae.</i>                   | 1, 4 |
| G. S. Dun, B.Sc.Ag., <i>Entomologist, Keravat.</i>   | 19   |
| I. F. de la Lande, M.Sc., <i>Biochemist C/o University of Melbourne.</i>   | 25   |
| I. J. O'Donnell, M.Sc., <i>Chemist, Aiyura via Lae.</i>  | 2, 5 |
| W. J. Hughes, <i>Agricultural Officer, District Agricultural Station, Bubia via Lae.</i>                             | 1, 4 |
|  | 1, 4 |

**Department of Forests**

|  |    |
|--|----|
| Port Moresby.  |    |
| J. B. McAdam, M.M., Dip.For. (Canberra), <i>Director.</i>  | 1  |
| J. S. Womersley, B.Sc., <i>Forest Botanist, Lae.</i>   | 3  |
| W. A. Heather, B.Sc., Dip.For. (Canberra), <i>Forest Officer, Keravat via Rabaul, New Britain.</i> | 11 |

**NEW SOUTH WALES****DEPARTMENT OF AGRICULTURE**

|  |    |
|--|----|
| Box 36, G.P.O., Sydney, (Tel. : B.056).                                    |    |
| R. J. Noble, Ph.D., M.Sc., B.Sc.Agr., <i>Under Secretary and Director.</i> | 1  |
| H. J. Hynes, M.Sc., D.Sc.Agr., <i>Assistant Director of Agriculture.</i>   | 1  |
| F. C. McCleery, B.Sc.Agr., <i>Biometrician.</i>                            | 29 |

**Division of Science Services****Biology**

|   |       |
|---|-------|
| (Tel. : B.056., Extensions, 2165, 2914).  |       |
| C. J. P. Magee, M.Sc., D.Sc.Agr., <i>Chief Biologist : plant diseases especially virus diseases of tropical plants.</i> | 6     |
| W. S. Sutton, B.Sc.Agr., <i>Senior Biologist : diseases of tomatoes, dairy bacteriology.</i>                            | 6, 22 |
| R. D. Wilson, M.Sc., M.Sc.Agr., <i>Plant Pathologist : bean diseases, vegetable diseases.</i>                           | 6     |
| Lilian R. Fraser, D.Sc., <i>Plant Pathologist : diseases of citrus fruit and of ornamental plants.</i>                  | 6     |
| T. B. Kiely, D.Sc.Agr., <i>Plant Pathologist : diseases of citrus fruit.</i>  | 6     |
| F. C. Butler, B.Sc.Agr., <i>Assistant Plant Pathologist : diseases of cereals and field crops.</i>                      | 6     |
| K. E. Hutton, B.Sc.Agr., <i>Assistant Plant Pathologist : diseases of pome and stone fruits.</i>                        | 6     |
| R. J. Conroy, B.Sc.Agr., <i>Assistant Plant Pathologist : diseases of vegetables.</i>                                   | 6     |



|  |    |
|--|----|
| J. R. Morschel, B.Sc.Agr., <i>Assistant Plant Pathologist</i> : diseases of stone and pome fruits. | 6  |
| H. H. Randell, <i>Bacteriologist</i> : bacteriology of dairy products.                             | 22 |
| D. Corbett, B.Sc.Agr., <i>Assistant Bacteriologist</i> : soils.                                    | 22 |

## Entomology

(Tel. : B.056, Extension 2226).

|   |    |
|---|----|
| T. McCarthy, <i>Chief Entomologist</i> .                      | 19 |
| S. L. Allman, M.Sc., B.Sc.Agr., <i>Senior Entomologist</i> .  | 19 |
| W. L. Morgan, B.Sc.Agr., <i>Entomologist</i> .                | 19 |
| P. C. Hely, B.Sc.Agr., <i>Entomologist</i> .                  | 19 |
| E. H. Zeck, <i>Entomologist</i> .                             | 19 |
| E. J. Wason, B.Sc.Agr., <i>Entomologist</i> .                 | 19 |
| C. R. Wallace, B.Sc.Agr., <i>Entomologist</i> .               | 19 |
| N. C. Lloyd, B.Sc.Agr., <i>Entomologist</i> .                 | 19 |
| G. Pasfield, B.Sc.Agr., <i>Entomologist</i> .                 | 19 |
| A. H. Friend, B.Sc.Agr., <i>Entomologist</i> .                | 19 |
| G. J. Shanahan, B.Sc.Agr., <i>Entomologist</i> .              | 19 |
| C. E. Chadwick, B.Sc.Agr., <i>Entomologist</i> .              | 19 |
| J. G. Gellatley, B.Sc.Agr., <i>Assistant Entomologist</i> .   | 19 |
| B. M. Braithwaite, B.Sc.Agr., <i>Assistant Entomologist</i> . | 19 |

## Agricultural Chemistry

(Tel. : B.056, Extension 2166).

|   |        |
|---|--------|
| A. V. Robinson, B.Sc.Agr., <i>Chief Chemist</i> .   | 24     |
| T. H. Johns, M.Sc., A.A.C.I., <i>Senior Chemist</i> .   | 24     |
| A. N. Old, B.Sc.Agr., <i>Analyst</i> : waters (irrigation and stock).                               | 24     |
| J. R. Fisher, B.Sc.Agr., <i>Analyst</i> : cereals and cereal products                               | 25     |
| R. H. M. Arnot, B.A., B.Sc.Agr., <i>Analyst</i> : soils, deficiencies.                              | 2      |
| M. F. Redies, M.Sc., A.A.C.I., <i>Analyst</i> : physical chemistry.                                 | 24     |
| D. K. O'Neill, A.S.T.C. (Chem.), A.A.C.I., <i>Analyst</i> : insecticides, fungicides, weed killers. | 24     |
| K. N. Wynne, B.Sc., <i>Assistant Analyst</i> .  | 15, 24 |
| A. J. Crawford, B.Sc.Agr., <i>Assistant Analyst</i> .   | 24     |
| F. W. Cradock, B.Sc.Agr., <i>Assistant Analyst</i> .  | 2, 24  |
| A. J. Meers, B.Sc.Agr., <i>Assistant Analyst</i> .  | 24     |

## Botanical

(Tel. : B.056, Extensions 2561, 2565).

|   |       |
|---|-------|
| R. H. Anderson, B.Sc.Agr., <i>Chief Botanist and Curator</i> , Sydney Botanic Gardens and National Herbarium.     | 3, 12 |
| H. K. C. Mair, B.Sc.Agr., <i>Senior Botanist</i> .  | 3, 12 |
| Miss J. W. Vickery, M.Sc., <i>Botanist</i> .  | 3, 12 |
| Miss M. D. Tindale, M.Sc., <i>Botanist</i> : Australian Liaison Officer at Royal Botanic Gardens, Kew, 1949-1951. | 3, 12 |
| L. A. S. Johnson, B.Sc., <i>Assistant Botanist</i> .  | 3, 12 |
| Miss J. G. Garden, B.Sc.Agr., <i>Assistant Botanist</i> .   | 3, 12 |
| Miss N. C. Ford, B.Sc., <i>Assistant Botanist</i> .   | 3, 12 |

**Division of Plant Industry**

(Tel. : B.056, Extensions 509, 510).

|   |       |
|---|-------|
| W. H. G. Poggendorff, B.Sc.Agr., <i>Chief of Division.</i>  | 1     |
| H. Wenholz, B.Sc.Agr., <i>Deputy Chief of Division.</i>   | 4, 7  |
| H. Bartlett, H.D.A., <i>Principal Agronomist (Extension)</i>  | 7     |
| J. L. Green, H.D.A., <i>Assistant Principal Agronomist (Extension)</i>                                | 7     |
| J. N. Whittet, H.D.A., <i>Principal Agronomist (Pastures).</i>  | 8     |
| C. K. Vears, B.Sc.Agr., <i>Assistant Principal Agronomist (Pastures).</i>                             | 8     |
| S. L. Macindoe, Ph.D., B.Sc.Agr., <i>Principal Agronomist (Research)</i>                              | 4     |
| N. S. Shirlow, B.Sc.Agr., <i>Assistant Principal Agronomist (Research).</i>                           | 7     |
| W. D. Kerle, H.D.A., <i>Special Agronomist : maize, sorghum, fodder crops.</i>                        | 7     |
| E. B. Furby, H.D.A., <i>Special Agronomist (Irrigation).</i>  | 7     |
| G. Nicholson, H.D.A., <i>Special Agronomist (Cereals).</i>  | 7     |
| W. M. Curteis, B.A., B.Sc.Agr., <i>Special Agronomist : rice ; fibre ; oil ; miscellaneous crops.</i> | 7     |
| A. C. Orman, H.D.A., <i>Special Agronomist (Vegetables).</i>  | 7     |
| T. E. Friend, B.Sc.Agr., <i>Agronomist (Vegetables).</i>  | 7     |
| A. Pearson, H.D.A., <i>Agronomist : land settlement.</i>  | 7     |
| K. R. Green, B.Sc.Agr., <i>Agronomist : weeds.</i>  | 8, 12 |
| A. Johnson, B.Sc.Agr., <i>Agronomist : pastures.</i>  | 8     |
| L. Judd, H.D.A., <i>Supervisor of Experiment Farms.</i>   | 28    |
| Miss A. I. Myers, <i>Seeds Officer.</i>   | 12    |
| N. H. Parbery, D.Sc.Agr., <i>Analyst : floriculture.</i>  | 2     |

**Hawkesbury Agricultural College**

Richmond (Tel. : Richmond 5.)

|  |                |
|--|----------------|
| E. A. Southee, O.B.E., M.A. (Oxon.), B.Sc.Agr., B.Sc., <i>Principal.</i>                       | 1, 27          |
| H. R. Richardson, B.Sc.Agr., <i>Deputy Principal.</i>  | 27             |
| A. N. Johnston, B.Sc.Agr., <i>Lecturer in Agricultural Botany and Entomology.</i>              | 3, 6, 8, 19    |
| T. Passlow, B.Sc.Agr., <i>Assistant Lecturer in Agricultural Botany and Entomology.</i>        | 3, 6, 8, 19    |
| W. McCarrol, A.C.T.S.M., A.I.C.A., <i>Lecturer in Agricultural Engineering.</i>                | 26, 28         |
| J. M. Hodges, A.S.T.C., <i>Lecturer in Agricultural Chemistry and Soil Physics.</i>            | 24             |
| B. F. Atkins, B.Sc.Agr., <i>Assistant Lecturer in Agricultural Chemistry and Soil Physics.</i> | 24             |
| J. O. Smith, B.Sc.Agr., <i>Lecturer in Agriculture.</i>  | 12             |
| J. Meade, B.Sc.Agr., <i>Lecturer in Agricultural and Dairy Bacteriology.</i>                   | 22             |
| M. H. Keefer, Q.D.A.H., <i>Lecturer in Cattle Breeding and Management.</i>                     | 14, 15, 17     |
| J. D. L. McGibbon, H.D.A., H.D.D., <i>Special Dairy Officer.</i>                               | 17             |
| D. I. Gillies, H.D.D., <i>Dairy Officer.</i>   | 17             |
| G. J. Smith, B.Sc.Agr., <i>Dairy Research Officer.</i>   | 22, 25         |
| C. J. Horth, H.D.A., <i>Fruit Officer : pome ; stone and citrus fruit.</i>                     | 9              |
| P. Henry, H.D.A., <i>Fruit Officer : pome ; stone and citrus fruit.</i>                        | 9              |
| E. J. Waring, B.Sc.Agr., <i>Agronomist : vegetable breeding and cultivation.</i>               | 2, 4, 7, 8, 12 |

# COMMONWEALTH OF AUSTRALIA

|  | Subject        |
|--|----------------|
| H. Suttie, H.D.A. : vegetables and field crops.                  | 2, 7, 8, 12    |
| J. A. Williamson, H.D.A., <i>Supervisor of Farm Operations</i> . | 12             |
| D. G. Christie, B.V.Sc., <i>Veterinary Officer</i> .             | 13, 14, 15, 16 |
| L. M. F. Russell, H.D.A., <i>Livestock Officer (pigs)</i> .      | 18             |
| C. Lawrence, <i>Livestock Officer (poultry)</i> .                | 14, 15, 16     |
| S. J. Wilkins, H.D.A., <i>Livestock Officer (poultry)</i> .      | 14, 15, 16     |
| R. D. Eastoe, H.D.A., <i>Livestock Officer (sheep)</i> .         | 14, 18         |
| H. G. Smith, E.B., S.B.A., <i>Livestock Officer (bees)</i> .     | 14, 15, 17     |

## Wagga Agricultural College and Experiment Station

Wagga Wagga (Tel. : Wagga 8).

|   |              |
|---|--------------|
| B. Doman, B.Sc.Agr., <i>Principal</i> .   | 1            |
| G. T. Dawson, H.D.A., <i>Agronomist (Farm Supervisor)</i>                                       | 7, 8         |
| J. R. Sutherland, B.Sc.Agr., <i>Lecturer</i> .  | 3, 6, 19, 22 |
| J. K. Symes, B.Sc.Agr., <i>Agronomist : cereal breeding</i> .                                   | 4            |
| C. H. Mort, H.D.A., <i>Fruit Officer : pome and stone fruits</i> .                              | 9            |
| G. L. Edwards, H.D.A., <i>Fruit Officer : pome and stone fruits</i> .                           | 9            |
| W. J. C. Hudson, B.Sc.Agr., <i>Agronomist : pasture plant breeding and pasture management</i> . | 8            |
| F. J. Nicholson, H.D.A., <i>Agronomist : cereals</i> .  | 2, 7         |
| L. J. Ballard, H.D.A., <i>Agronomist : cereals</i> .  | 2, 7         |
| H. Matthews, H.D.A., H.D.D., <i>Dairy Officer</i> .   | 17           |
| C. R. Graham, H.D.A., <i>Livestock Officer (pigs)</i> .   | 18           |
| G. W. Smith, <i>Livestock Officer (poultry)</i> .   | 18           |
| H. M. Greaves, H.D.A., <i>Livestock Officer (poultry)</i> .                                     | 18           |
| N. W. Bennett, H.D.A., <i>Livestock Officer (sheep and wool)</i> .                              | 18           |
| D. A. Taylor, H.D.A., <i>Livestock Officer (sheep and wool)</i> .                               | 18           |

## Experiment Farms

BATHURST. (Tel. : Bathurst 179).

|  |   |
|--|---|
| F. F. Filan, B.Sc.Agr., <i>Manager</i> .                               | 1 |
| B. F. Regan, B.Sc.Agr., <i>Agronomist : pasture plant breeding</i> .   | 8 |
| R. Thomson, H.D.A., <i>Agronomist : field crops</i> .                  | 8 |
| H. W. Lea, B.Sc.Agr., <i>Agronomist : tobacco and vegetables</i> .     | 4 |
| J. A. Holbeche, H.D.A., <i>Fruit Officer : pome and stone fruits</i> . | 9 |
| J. F. Johnson, H.D.A., <i>Fruit Officer : pome and stone fruits</i> .  | 9 |

CONDOBOLIN (Tel. : Condobolin 81).

|   |   |
|---|---|
| R. J. Hobson, <i>Acting Manager</i> .                       | 1 |
| R. W. Fitzsimmons, B.Sc.Agr., <i>Agronomist : cereals</i> . | 7 |
| D. J. McFarlane, B.Sc.Agr., <i>Agronomist : pastures</i> .  | 8 |

COWRA. (Tel. : Cowra 347).

|  |      |
|--|------|
| C. Walkden-Brown, H.D.A., <i>Manager</i> .                 | 1    |
| T. Adams, H.D.A., <i>Agronomist : pastures and wheat</i> . | 7, 8 |

GLEN INNES. (Tel. : Glen Innes 163).

|  |   |
|--|---|
| E. C. Powell, H.D.A., <i>Manager</i> .                                       | 1 |
| W. T. Atkinson, B.Sc.Agr., <i>Agronomist : pastures and maize breeding</i> . | 4 |



# COMMONWEALTH OF AUSTRALIA

|  | Subject |
|--|---------|
| J. G. Carroll, B.Sc.Agr., <i>Agronomist</i> : potato and oat breeding.                     | 4       |
| W. V. Single, B.Sc.Agr., <i>Agronomist</i> : wheat breeding.                               | 4       |
| D. Wallin, H.D.A., <i>Agronomist</i> : field crops.  | 7       |
| F. C. Fletcher, H.D.A., <i>Agronomist</i> : pastures.                                      | 8       |
| E. C. Connor, H.D.A., <i>Fruit Officer</i> : pome and stone fruits.                        | 9       |
| <b>GRAFTON.</b> (Tel. : Grafton 39.)   |         |
| M. J. E. Squire, H.D.A., <i>Manager</i> .  | 1       |
| L. R. Kavanagh, B.Sc.Agr., <i>Agronomist</i> : maize breeding.                             | 4       |
| C. E. Collins, H.D.A., <i>Agronomist</i> : maize and cultural experiments.                 | 7       |
| K. A. Watson, B.Sc.Agr., <i>Agronomist</i> : pastures and crops.                           | 7       |
| J. C. Skinner, B.Sc.Agr., <i>Agronomist</i> : maize breeding.                              | 4       |
| <b>TEMORA.</b> (Tel. : Temora 115).  |         |
| T. E. Kitamura, B.Sc.Agr., <i>Manager</i> .  | 1       |
| R. H. Martin, B.Sc.Agr., <i>Agronomist</i> : cereal breeding.                              | 4       |
| R. F. Russell, B.Sc.Agr., <i>Agronomist</i> : pastures.                                    | 8       |
| N. S. Tickner, H.D.A., <i>Agronomist</i> : cereals.  | 7       |
| <b>TRANGIE.</b> (Tel. : Trangie 87).   |         |
| E. S. May, <i>Manager</i> .  | 1       |
| E. G. Cuthbertson, B.Sc.Agr., <i>Agronomist</i> : pastures.                                | 8       |
| K. F. Flemons, H.D.A., <i>Agronomist</i> : wheat.  | 7       |
| <b>YANCO.</b> (Tel. : Yanco 5).  |         |
| P. F. Stanton, H.D.A., <i>Manager</i> .  | 1       |
| G. S. Purss, B.Sc.Agr., <i>Agronomist</i> : rice and vegetable breeding.                   | 4       |
| C. E. Purdue, H.D.A., <i>Agronomist</i> : vegetables.                                      | 7       |
| C. R. Hood, H.D.A., <i>Agronomist</i> : general crops.                                     | 7       |
| F. J. Gardner, B.Sc.Agr., <i>Agronomist</i> : pastures.                                    | 8       |
| L. P. Olney, R.D.A., <i>Fruit Officer</i> : citrus, pome and stone fruits,<br>grape vines. | 9       |
| <b>LEETON.</b> (Tel. : Yanco 18).  |         |
| E. W. Bowmaker, H.D.A., <i>Manager</i> .   | 1       |
| J. E. Jessup, B.Sc.Agr., <i>Agronomist</i> : pastures.                                     | 8       |
| R. I. Johnson, B.Sc.Agr., <i>Agronomist</i> : linseed and general crops.                   | 7       |
| <b>WOLLONGBAR.</b> (Tel. : Alstonville 40).  |         |
| G. Giles, H.D.A., H.D.D., <i>Manager</i> .   | 1       |
| G. W. Kyneur, B.Sc.Agr., <i>Agronomist</i> : pastures.                                     | 8       |

## Division of Horticulture

|   |   |
|---|---|
| (Tel. : B.056, Extensions 2766, 2767, 524.)                             |   |
| C. G. Savage, R.D.A., <i>Chief, Division of Horticulture</i> .          | 1 |
| H. W. Broadfoot, <i>Deputy Chief of Division</i> .                      | 9 |
| R. J. Benton, <i>Principal Fruit Officer (Extension)</i> .              | 9 |
| J. A. Ballantyne, <i>Special Fruit Officer</i> : pome fruits.           | 9 |
| H. L. Manuel, R.D.A., <i>Principal Fruit Officer</i> : viticulture.     | 9 |
| H. W. Eastwood, H.D.A., <i>Special Fruit Officer</i> : tropical fruits. | 9 |

# COMMONWEALTH OF AUSTRALIA

|   | Subject |
|---|---------|
| R. G. Kebby, <i>Special Fruit Officer</i> : citrus.   | 9       |
| F. T. Bowman, Ph.D., M.Sc., B.Sc.Agr., <i>Special Fruit Officer (Research)</i> : genetics.        | 9       |
| L. F. Mandelson, B.Sc.Agr., <i>Fruit Officer (Research)</i> : genetics.                           | 9       |
| J. D. Bryden, <i>Special Fruit Officer</i> : stone and berry fruits.                              | 9       |
| B. O. French, B.Sc.Agr., <i>Fruit Officer (Research)</i> : irrigation.                            | 9       |
| S. M. Sykes, B.Sc.Agr., <i>Fruit Officer (Research)</i> : quick freezing fruit and vegetables.    | 9       |
| C. P. Fleming, H.D.A., <i>Fruit Officer</i> : citrus, pome and stone fruits under irrigation.     | 9       |
| J. G. Jeater, H.D.A., <i>Fruit Officer</i> : tropical fruits.                                     | 9       |
| E. C. Levitt, H.D.A., <i>Fruit Officer</i> : citrus and stone fruits.                             | 9       |
| K. D. McGillivray, H.D.A., <i>Fruit Officer</i> : citrus.   | 9       |
| J. V. McGrath, <i>Fruit Officer</i> : pome and stone fruits.                                      | 9       |
| F. S. Oldham, <i>Fruit Officer</i> : citrus, dried vine and tree fruits under irrigation.         | 9       |
| A. F. Murray, H.D.A., <i>Fruit Officer</i> : citrus, pome and stone fruits under irrigation.      | 9       |
| A. H. Skepper, H.D.A., <i>Fruit Officer</i> : citrus, pome and stone fruits under irrigation.     | 9       |
| E. C. Whittaker, <i>Fruit Officer</i> : pome and stone fruits, also packing.                      | 9       |
| H. J. Cann, H.D.A., <i>Fruit Officer</i> : tropical fruits.                                       | 9       |
| A. C. Eady, H.D.A., <i>Fruit Officer</i> : tropical fruits.                                       | 9       |
| J. K. Long, B.Sc.Agr., <i>Fruit Officer (Research)</i> : processing and storage of citrus fruits. | 9       |
| J. W. Turpin, Q.D.A., <i>Fruit Officer (Research)</i> : processing and storage of citrus fruits.  | 9       |
| J. R. Niccol, B.Sc.Agr., <i>Fruit Officer (Research)</i> : storage.                               | 30      |
| C. P. Fleming, H.D.A., <i>Fruit Officer</i> : citrus ; pome and stone fruits under irrigation.    | 9       |
| L. A. Scott, H.D.A., <i>Fruit Officer</i> : citrus ; pome and stone fruits under irrigation.      | 9       |
| J. M. Sidlow, B.Sc.Agr., <i>Fruit Officer (Research)</i> : irrigation.                            | 9       |
| Miss M. I. Parlby, <i>Fruit Preserving Instructor</i> .   | 30      |
| GRIFFITH VITICULTURAL NURSERY (Tel. : Hanwood 30).  |         |
| A. C. Clifton, <i>Superintendent</i> : grape production.  | 9       |
| NARARA VITICULTURAL NURSERY (Tel. : Gosford 44).  |         |
| N. D. Lackie, <i>Superintendent</i> : tree and vine production.                                   | 9       |

## Division of Dairying

|   |           |
|---|-----------|
| (Tel. : B.056, Extensions 816, 817, 818).                                       |           |
| G. McGillivray, H.D.A., H.D.D., <i>Chief of Division</i> .                      | 1, 14, 17 |
| A. C. Small, H.D.D., <i>Deputy Chief of Division</i> .                          | 14, 17    |
| F. Wilkinson, <i>Principal Dairy Officer</i> .                                  | 14, 17    |
| A. B. Shelton, <i>Special Dairy Officer</i> : dairy products other than butter. | 17        |
| I. W. Scott, H.D.A., H.D.D., <i>Special Dairy Officer</i> : animal husbandry.   | 14        |

|   | Subject |
|---|---------|
| A. L. Astbury, H.D.A., H.D.D., <i>Dairy Officer.</i>    | 14, 17  |
| S. R. Ballard, H.D.D., <i>Dairy Officer.</i>            | 14, 17  |
| J. W. G. Smith, H.D.D., <i>Dairy Officer.</i>           | 14, 17  |
| J. T. Dickson, H.D.A., H.D.D., <i>Dairy Officer.</i>    | 17      |
| J. W. Davison, H.D.D., <i>Dairy Officer.</i>            | 14, 17  |
| J. S. Wilson, H.D.A., H.D.D., <i>Dairy Officer.</i>     | 14, 17  |
| F. A. Vernon, H.D.D., <i>Dairy Officer.</i>             | 14, 17  |
| C. E. Chapman, H.D.D., <i>Dairy Officer.</i>            | 14, 17  |
| E. T. H. Ballard, H.D.A., H.D.D., <i>Dairy Officer.</i> | 14, 17  |
| H. Harrison, H.D.D., <i>Dairy Officer.</i>              | 14, 17  |
| R. M. Marsh, <i>Dairy Officer.</i>                      | 14, 17  |
| D. R. Crowfoot, H.D.D., <i>Dairy Officer.</i>           | 14, 17  |

## Division of Animal Industry

(Tel. : B.056, Extensions 502, 508)

|  |                                 |
|--|---------------------------------|
| W. L. Hindmarsh, M.R.C.V.S., B.V.Sc., D.V.H., <i>Chief Veterinary Surgeon and Chief of Division.</i> | 1, 16, 18                       |
| H. G. Belschner, D.V.Sc., <i>Deputy Chief of Division.</i>   | 17, 18                          |
| G. Edgar, B.V.Sc., <i>Director of Veterinary Research.</i>   | 1, 14, 15, 16, 17<br>21, 22, 23 |
| C. C. Blumer, B.V.Sc., <i>Chairman, Board of Tick Control.</i>                                       | 1                               |
| E. G. Macdonald, B.V.Sc., <i>Senior Veterinary Officer.</i>  | 16, 18                          |
| J. C. Keast, B.V.Sc., <i>Senior Veterinary Research Officer.</i>                                     | 22, 23                          |
| J. T. Hayston, B.V.Sc., <i>Veterinary Research Officer.</i>  | 22, 23                          |
| G. L. McClymont, B.V.Sc., <i>Veterinary Research Officer.</i>  | 15                              |
| F. H. W. Morley, B.V.Sc., <i>Veterinary Research Officer.</i>  | 14                              |
| A. N. Sinclair, B.V.Sc., <i>Veterinary Research Officer.</i>   | 14                              |
| H. E. R. Beattie, B.V.Sc., <i>Veterinary Research Officer.</i>                                       | 18, 22                          |
| I. G. Pearson, B.V.Sc., <i>Veterinary Research Officer.</i>  | 22, 23                          |
| S. L. Black, M.R.C.V.S., <i>District Veterinary Officer.</i>   | 16, 18                          |
| R. M. Watts, B.V.Sc., <i>District Veterinary Officer.</i>  | 16, 18                          |
| J. N. Henry, B.V.Sc., <i>District Veterinary Officer.</i>  | 16, 18                          |
| R. A. Hall, B.V.Sc., <i>District Veterinary Officer.</i>   | 16, 18                          |
| J. S. Healey, B.V.Sc., <i>District Veterinary Officer.</i>   | 16, 18                          |
| A. N. A. Harris, B.V.Sc., <i>District Veterinary Officer.</i>  | 16, 18                          |
| N. K. Golding, B.V.Sc., <i>District Veterinary Officer.</i>  | 16, 18                          |

## Division of Marketing and Agricultural Economics

(Tel. : B.056, Extensions 2288, 2937)

|  |       |
|--|-------|
| C. J. King, M.A., B.V.Sc., D.P.A., <i>Chief of Division.</i>         | 1, 27 |
| K. O. Campbell, B.Sc.Agr., <i>Senior Economics Research Officer.</i> | 27    |
| P. C. Druce, B.Ec., <i>Economics Research Officer.</i>               | 27    |
| W. F. Owen, B.Sc.Agr., <i>Economics Research Officer.</i>            | 27    |
| F. H. Gruen, B.A., B.Com., <i>Economics Research Officer.</i>        | 27    |
| Miss A. M. Kingsland, B.Sc.Agr., <i>Economics Research Officer.</i>  | 27    |
| L. C. Yorke, B.Ec., <i>Economics Research Officer.</i>               | 27    |
| A. G. Lloyd, B.Ec., <i>Economics Research Officer.</i>               | 27    |



## DEPARTMENT OF CONSERVATION

**Administrative Office**

|  |   |
|--|---|
| Agriculture Building, Farrer Place, Sydney. (Tel. : B.06).                         |   |
| C. K. Jacka, <i>Under Secretary and Permanent Head.</i>                            | 1 |
| J. R. Butler, B.A., LL.B., <i>Assistant Under Secretary and Personnel Officer.</i> | 1 |

**Soil Conservation Service**

|  |      |
|--|------|
| E. E. S. Clayton, H.D.A., <i>Commissioner, Sydney.</i>   | 1, 2 |
| L. G. Kaleski, B.Sc. (Agr.), <i>Chief Soil Conservationist.</i>  | 1, 2 |
| H. A. Fraser, H.D.A., <i>Senior Soil Conservationist.</i>  | 2    |
| T. P. Taylor, H.D.A., <i>District Soil Conservationist, Goulburn.</i><br>(Tel. : 1116).                | 2    |
| R. Powles, B.Sc., <i>Soil Conservationist, Sydney.</i>   | 2    |
| J. Stewart, B.Sc. (Agr.), <i>District Soil Conservationist, Inverell.</i><br>(Tel. : 684).             | 2    |
| L. W. Smith, H.D.A., H.D.D., <i>District Soil Conservationist, Wagga Wagga.</i> (Tel. 2564).           | 2    |
| T. F. Mau, H.D.A., <i>District Soil Conservationist, Tamworth.</i><br>(Tel. : B. 749.)                 | 2    |
| H. T. Nicholas, H.D.A., <i>District Soil Conservationist, Orange</i><br>(Tel. 946).                    | 2    |
| C. M. Blandford, H.D.A., <i>District Soil Conservationist, Scone.</i><br>(Tel. : 306).                 | 2    |
| G. M. Pettitt, H.D.A., <i>Officer in Charge, Wellington Research Station.</i> (Tel. : Wellington 373). | 1, 2 |
| G. R. Wiltshire, H.D.A., <i>Officer in Charge, Cowra Research Station.</i><br>(Tel. : Cowra 486).      | 1, 2 |
| B. S. Walker, H.D.A., <i>Officer in Charge, Gunnedah Research Station.</i><br>(Tel. : Gunnedah 300).   | 1, 2 |
| A. R. Tewksbury, H. D. A., <i>Officer in Charge, Scone Research Station.</i> (Tel. : Scone 306).       | 1, 2 |
| D. L. Lamy, H.D.A., <i>Officer in Charge, Wagga Research Station.</i><br>(Tel. : Wagga 2501).          | 1, 2 |
| J. S. Harris, H.D.A., <i>Officer in Charge, Inverell Research Station.</i><br>(Tel. : Inverell 402).   | 1, 2 |
| R. W. Condon, B.Sc. (Agr.), <i>Research Officer and Botanist, Condobolin.</i> (Tel. : Condobolin 313.) | 2, 3 |

**Water Conservation and Irrigation Commission**

|   |    |
|---|----|
| Head Office, Sydney. (Tel. : B.06.)   |    |
| W. Rawlings, <i>Chairman.</i>   | 1  |
| J. Messner, <i>Commissioner.</i>  | 1  |
| C. C. Corbett, <i>Commissioner.</i>   | 1  |
| J. J. O'Brien, <i>Secretary.</i>  | 1  |
| J. W. Murray, <i>Principal Engineer, Investigations.</i>                          | 28 |
| V. T. England, D.S.O., B.E., A.M.I.E. (Aust.), <i>Hydrographic Engineer.</i>      | 28 |
| G. W. Broughton, L.S., A.M.I.E. (Aust.), <i>Executive Engineer, Water Rights.</i> | 28 |

|   |               |
|---|---------------|
| S. H. Knight, A.M.I.E. (Aust.), <i>Executive Engineer, Operation and Maintenance.</i> | Subject<br>28 |
| E. R. Smith, <i>Executive Engineer, Farm Water Supplies.</i>                          | 28            |

## COUNTRY OFFICES

|  |    |
|--|----|
| H. Mallaby, H.D.A., <i>Manager, Murrumbidgee Irrigation Areas, Leeton.</i> (Tel. : Leeton 14).             | 1  |
| A. J. Tipping, B.C.E., A.M.I.E. (Aust.), <i>District Engineer, Leeton.</i>                                 | 28 |
| H. N. England, B.Sc., <i>Principal Research Officer, Leeton.</i>   | 2  |
| R. F. R. Kirby, <i>Acting District Engineer, Griffith.</i> (Tel. Griffith 5).                              | 28 |
| C. L. Bird, <i>District Engineer, Berriquin Irrigation District, Finley.</i> (Tel. : Finley 120).          | 28 |
| F. I. Bolton, <i>District Engineer, Wakool Irrigation District, Deniliquin.</i> (Tel. Deniliquin 68).      | 28 |
| K. J. F. Coventry, <i>District Engineer, Jemalong Irrigation District, Forbes.</i> (Tel. : Forbes 222).    | 28 |
| J. C. Flattley, <i>District Engineer, Moree</i> (Tel. Moree 243).  | 28 |
| F. P. H. Barrett, <i>Manager, Curlwaa and Coomealla Irrigation Areas, Wentworth.</i> (Tel. : Curlwaa 236). | 1  |
| T. A. Kelly, <i>Officer in Charge, Hay Irrigation Area.</i> (Tel. : Hay 122).                              | 1  |

## FORESTRY COMMISSION OF NEW SOUTH WALES

44, Margaret Street, Sydney. (G.P.O. Box. 2667 EE, Sydney).  
(Tel. : B.06, Extension 2864).

|  |       |
|--|-------|
| E. L. S. Hudson, Dip.For. (Canberra), <i>Commissioner.</i> | 1, 10 |
|--|-------|

## Division of Forest Management

|   |    |
|---|----|
| W. D. Muir, Dip. For. (Canberra), <i>Forest Management Officer.</i>                       | 10 |
| G. H. Maclean, Dip.For. (Canberra), <i>Deputy Forest Management Officer.</i>              | 10 |
| F. M. Bailey, B.Sc., Dip.For. (Canberra), Dip. For. (Oxon.), <i>Chief Silviculturist.</i> | 10 |
| P. T. Cooke, B.Sc., Dip.For. (Canberra), <i>Inspector (Management).</i>                   | 10 |
| R. H. Luke, Dip.For. (Canberra), <i>Fire Control Officer.</i>                             | 10 |
| B. U. Byles, B.Sc., <i>District Forester (Management).</i>                                | 10 |
| P. D. Teague, Dip.For. (Canberra.), <i>District Forester (Management).</i>                | 10 |
| A. S. Richards, Dip.For. (Canberra), <i>District Forester (Management).</i>               | 10 |
| E. L. Regan, Dip.For. (Canberra), <i>Senior Forester (Management).</i>                    | 10 |
| A. D. Lindsay, B.Sc. (For.), <i>Senior Forester (Management).</i>                         | 10 |
| B. Farrell, B.A., Dip.For. (Canberra), <i>Senior Forester (Management).</i>               | 10 |
| R. B. McLean, <i>Principal Forest Surveyor.</i>   | 10 |
| J. P. McNally, <i>Chief Forest Assessor.</i>  | 10 |
| J. H. Green, B.Sc., B.Sc. (For.), Dip.For. (Canberra), <i>Forester.</i>                   | 10 |
| H. Porter, B.Sc., B.Sc. (For.), Dip.For. (Canberra), <i>Forester.</i>                     | 10 |
| J. A. Alexander, B.Sc., B.Sc. (For.), Dip.For. (Canberra), <i>Forester.</i>               | 10 |
| J. L. Henry, B.Sc., B.Sc. (For.), Dip.For. (Canberra), <i>Forester.</i>                   | 10 |
| J. O. Dark, B.Sc. (For.), Dip.For. (Canberra.), <i>Forester.</i>                          | 10 |
| W. T. Feagan, B.Sc. (For.), Dip.For. (Canberra), <i>Forester.</i>                         | 10 |

## COMMONWEALTH OF AUSTRALIA

|   | Subject |
|---|---------|
| T. R. Brabin, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .    | 10      |
| H. M. Bell, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .      | 10      |
| A. G. McArthur, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .  | 10      |
| W. R. Hindmarsh, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> . | 10      |
| R. J. Edwards, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .   | 10      |
| D. B. Dun, B.Sc. (For.), Dip. For. (Canberra), <i>Forester</i> .      | 10      |
| R. P. Leck, B.Sc. (For.), Dip.For. (Canberra.), <i>Forester</i> .     | 10      |
| G. S. Lugton, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .    | 10      |
| D. A. T. Holmes, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> . | 10      |
| M. J. Gardner, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .   | 10      |
| N. Davies, B.Sc. (For.), Dip.For. (Canberra), <i>Forester</i> .       | 10      |

### Division of Economics and Marketing

|  |        |
|--|--------|
| E. L. Westbrook, Dip.For. (Canberra), <i>Chief</i> . | 10, 27 |
| R. J. Ritchie, <i>Deputy Chief</i> .                 | 10, 27 |

### Division of Wood Technology

|  |            |
|--|------------|
| 96, Harrington Street, Sydney. (Tel. : BW.5404, BW. 6788).                               |            |
| E. B. Huddleston, B.Sc., B.E., <i>Senior Research Officer</i> .                          | 11, 28     |
| K. L. Taylor, B.Sc.Agr., <i>Deputy Senior Research Officer</i> .                         | 11, 19     |
| L. H. Bryant, A.S.T.C., A.A.C.I., <i>Research Officer : wood chemistry</i> .             | 5, 11, 24  |
| J. Delmenico, B.Sc., <i>Wood Chemistry Assistant</i> .                                   | 5, 11, 24  |
| P. J. Martin, B.Sc., <i>Wood Chemistry Assistant</i> .                                   | 5, 11, 24  |
| F. R. Humphreys, A.S.T.C., A.A.C.I., <i>Wood Chemistry Assistant</i> .                   | 11, 24, 28 |
| D. T. Hartigan, B.Sc.Agr., <i>Forest Pathologist</i> .                                   | 6, 11      |
| Miss R. M. Aird, B.Sc., <i>Assistant Pathologist</i> .                                   | 6, 11      |
| Miss P. M. Millington, B.Sc., <i>Assistant Pathologist</i> .                             | 6, 11      |
| G. L. Canaway, A.S.T.C., <i>Research Officer (Extension) (Forestry Office, Casino)</i> . | 11         |
| A. J. K. Hutchison, A.S.T.C. : sawmill and wood-working machinery.                       | 11, 28     |
| F. B. Shambler : wood identification and utilisation.                                    | 11         |
| Miss M. C. Bowyer, B.Sc. : wood identification and utilisation.                          | 11         |
| K. R. Bootle, B.Sc. : utilisation.   | 11         |
| C. Kemp : utilisation.   | 11         |
| P. W. Hadlington, B.Sc.Agr. : forest entomology.   | 11, 19     |
| E. R. Fogl, B.Sc.Agr. : seasoning and preservation.                                      | 11         |
| W. J. Stephens, A.S.T.C. : seasoning and preservation.                                   | 11, 24     |
| P. Demeduk, Dip.Eng. (Vienna) : seasoning and preservation.                              | 11, 28     |

## UNIVERSITY OF SYDNEY

### School of Agriculture

|   |            |
|---|------------|
| J. R. A. McMillan, D.Sc.Agr., <i>Professor of Agriculture and Dean of the Faculty, University of Sydney</i> : crops : plant breeding : vegetable seeds. | 1, 4, 12   |
| W. L. Waterhouse, D.Sc.Agr., D.I.C. (Lond.), <i>Research Professor of Agriculture</i> : plant pathology and genetics : disease resistance.              | 4, 6, 7, 8 |



# COMMONWEALTH OF AUSTRALIA

|   | Subject      |
|---|--------------|
| E. G. Hallsworth, Ph.D., A.R.I.C., <i>Senior Lecturer in Agricultural Chemistry</i> : soils ; plant and animal nutrition.   | 2, 5, 15     |
| E. J. Breakwell, M.Agr.Sc., <i>Senior Lecturer in Agronomy</i> : land utilisation ; crops ; pastures.   | 7, 8         |
| B. Breyer, Ph.D., M.D., F.A.C.I., <i>Lecturer in General and Agricultural Chemistry</i> : organic and physical chemistry applied to biological problems ; polarography.     | 24, 25       |
| F. R. Gibbons, B.Sc., <i>Lecturer in Agricultural Chemistry</i> : soil genesis and soil fertility.  | 2            |
| A. R. Woodhill, B.Sc.Agr., <i>Lecturer in Entomology and Agricultural Entomology</i> : biology ; systematics and control of Australian mosquitoes ; entomological problems. | 19           |
| I. A. Watson, B.Sc.Agr., Ph.D., <i>Senior Lecturer in Agriculture</i> : plant pathology ; genetics and plant breeding.  | 4, 6         |
| N. H. White, D.Sc., <i>Lecturer in Agricultural Botany</i> : host-parasite relationships ; plant viruses.   | 6, 7, 20, 22 |
| E. P. Baker, B.Sc.Agr., Ph.D., <i>Graduate Research Assistant in Genetics and Plant Breeding</i> : cereal breeding.   | 4            |
| D. B. Duncan, B.Sc.Agr., B.A., Ph.D., <i>Senior Lecturer in Statistical Methods</i> : statistical methods applied to agricultural problems.                                 | 29           |
| J. M. Vincent, B.Sc.Agr., Dip.Bact. (Lond.), <i>Senior Lecturer in Agricultural Microbiology and Biochemistry</i> : chemistry of moulds ; nodule-forming bacteria.          | 22, 25       |
| Dorothy Shaw, B.Sc.Agr., <i>Teaching Fellow in Agriculture</i> : plant pathology and genetics.  | 4, 6, 7, 8   |
| Lucinda Wyndham, B.Sc.Agr., <i>Research Officer</i> : cytogenetics.   | 4, 6         |
| H. B. Kerr, B.Sc.Agr., <i>Meggitt Ltd. Research Officer</i> : linseed and flax improvement ; plant pathology.   | 4, 6         |
| Gwen Robertson, B.Sc., <i>Research Officer</i> .  | 2            |
| F. J. Radcliff, B.Sc., <i>Teaching Fellow in Agricultural Chemistry</i> : kinetics of anti-body antigen reaction.   | 25           |
| Hilary Purchase, B.Sc.Agr., <i>Research Officer</i> : nodule-forming bacteria.  | 22           |
| C. Warner, B.Sc., <i>Teaching Fellow in Biochemistry</i> : chemistry of microbial inhibition.   | 25           |

## Botany School

(Tel. : M.W. 0522).

|  |              |
|--|--------------|
| Alan Burges, M.Sc., Ph.D., <i>Professor of Botany</i> : mycology ; general botany.                               | 2, 20        |
| J. McLuckie, M.A., D.Sc., <i>University Reader in Botany</i> : plant anatomy ; mycology ; plant ecology ; algae. | 3, 6, 10, 20 |
| P. Brough, M.A., D.Sc., F.R.S.E., <i>Senior Lecturer in Botany</i> .   | 3            |
| F. Mercer, M.Sc., <i>Lecturer in Botany</i> : plant physiology.  | 3            |
| N. Beadle, D.Sc., <i>Lecturer in Botany</i> : ecology and physiology.  | 3            |
| S. Smith-White, B.Sc.Agr., <i>Lecturer in Botany</i> : cytology and genetics.                                    | 3            |
| H. N. Robertson, Ph.D., <i>Acting Lecturer in Botany</i> : plant physiology.                                     | 3            |
| Frances M. V. Hackney, D.Sc., <i>Teaching Fellow in Plant Physiology</i> .                                       | 3, 25        |

# COMMONWEALTH OF AUSTRALIA

Subject

|  |      |
|--|------|
| Marie Hutton, B.Sc., <i>Teaching Fellow in Botany.</i>       | 3    |
| J. T. Waterhouse, B.Sc., <i>Teaching Fellow in Mycology.</i> | 20   |
| Ruth Wolf, M.Sc., <i>Teaching Fellow in Botany.</i>          | 3    |
| Barbara Richards, B.Sc., <i>Demonstrator in Botany.</i>      | 3    |
| Peggy J. Bradhurst, B.Sc., <i>Demonstrator in Botany.</i>    | 3    |
| Enid Fenton, B.Sc., <i>Research Assistant.</i>               | 2,20 |
| Mary M. Hindmarsh, B.Sc., <i>Linnean Macleay Fellow.</i>     | 3    |

## Faculty of Veterinary Science

(Tel. : M.W. 0522).

|  |            |
|--|------------|
| R. V. S. Bain, B.V.Sc., <i>Senior Lecturer in Veterinary Pathology and Bacteriology</i> : <i>Pasteurella</i> infection in domestic animals.  | 16         |
| J. D. Biggers, B.Sc., B.V.Sc., M.R.C.V.S., <i>Lecturer in Veterinary Physiology</i> : intravaginal assays of oestrogens, the oestrogenic activity of subterranean clover, circulation of the uterus. | 13         |
| A. W. Blackshaw, B.V.Sc., <i>Research Assistant in Veterinary Physiology</i> : preservation and metabolism of mammalian spermatozoa.   | 13         |
| D. C. Blood, B.V.Sc., <i>Lecturer in Veterinary Medicine</i> : metabolic diseases of dairy cattle.   | 16         |
| H. R. Carne, D.V.Sc., <i>Professor of Veterinary Pathology and Bacteriology</i> : infectious pustular dermatitis of sheep, caseous lymphadenitis of sheep, heritable epithelioma in sheep.           | 16<br>16   |
| C. W. Emmens, D.Sc., Ph.D., <i>Veterinary Physiology</i> : preservation and metabolism of mammalian spermatozoa, relation of sex hormones to mammalian sterility.                                    | 13         |
| G. F. Finlay, B.V.Sc., Ph.D. (Cantab.), <i>Teaching Fellow in Animal Genetics</i> : genetic surveys of domestic animals.   | 14         |
| H. J. Geddes, M.Sc.Agr., <i>Senior Lecturer in Animal Husbandry</i> : feeding and management of dairy cattle, calf rearing on low milk diets.  | 15         |
| R. M. C. Gunn, D.V.Sc., B.Sc.Agr., B.Sc., M.R.C.V.S., <i>Professor of Veterinary Science</i> : fertility in the ram.   | 14         |
| C. S. Sapsford, B.V.Sc., <i>Lecturer in Veterinary Anatomy</i> : fertility in the ram.   | 14         |
| J. D. Steel, B.V.Sc., <i>Lecturer in Veterinary Medicine</i> : electrocardiography in domestic animals, hepatitis of dietary origin in sheep   | 13, 15, 16 |
| R. M. Webb, B.V.Sc., <i>Senior Lecturer in Veterinary Anatomy</i> : circulation in the liver of the sheep.   | 13         |
| I. G. White, B.V.Sc., <i>Lecturer in Veterinary Physiology</i> : metabolism of spermatozoa, biochemistry of twin cattle.   | 13         |
| J. H. Whitem, B.V.Sc., <i>Lecturer in Veterinary Pathology and Bacteriology</i> : virus encephalitis in dogs.  | 16         |
| Nancy Wickham, B.V.Sc., <i>Lecturer in Veterinary Pathology and Bacteriology</i> : infectious pustular dermatitis in sheep, virus encephalitis in dogs.  | 16<br>16   |

## Linnean Society of New South Wales

Science House, Gloucester Street, Sydney (Tel. : BU. 1627).

|   |    |
|---|----|
| Adele A. Millerd, M.Sc. (Sydney), <i>Linnean Macleay Fellow</i> : biochemistry ; oxidative metabolism of <i>solanum tuberosum</i> . | 25 |
|---|----|

Judith Balmain, M.Sc. (Sydney), *Linnean Macleay Fellow* : bio-chemistry ; dehydrogenase systems in resting cell suspensions of *A. aerogenes*.

## VICTORIA

## DEPARTMENT OF AGRICULTURE

Treasury Gardens, Melbourne, C.2. (Tel. : F. 0234).

## Administrative Division

|   |   |
|---|---|
| H. A. Mullett, B.Agr.Sc., <i>Director of Agriculture</i> .  | 1 |
| P. Ryan, B.Agr.Sc., <i>Chief Inspector of Agriculture</i> . | 1 |
| J. Keane, B.Agr.Sc., <i>Information Officer</i> .           | 1 |

## Agricultural Division

|   |   |
|---|---|
| J. Brake, B.Agr.Sc., <i>Agricultural Superintendent, Head of Division</i> . | 1 |
|---|---|

## CEREALS AND PASTURES

|  |       |
|--|-------|
| W. B. Miller, M.Agr.Sc., <i>Senior Inspector of Agriculture</i> .                                  | 7     |
| H. L. Hore, B.Agr.Sc., <i>Senior Agronomist</i> .  | 7     |
| A. R. Raw, M.Agr.Sc., <i>Senior Cereal Geneticist</i> . (Tel. Werribee 19).                        | 4     |
| P. H. Debrett, B.Agr.Sc., <i>Assistant Cereal Geneticist, Werribee</i> .                           | 4     |
| P. Pryke, B.Sc.Agr., <i>Assistant Geneticist, Werribee</i> .                                       | 4     |
| B. R. Wardle, B.Sc., <i>Assistant Geneticist, Werribee</i> .                                       | 4     |
| Miriell Balding, B.Sc., <i>Assistant Geneticist, Werribee</i> .                                    | 4     |
| H. C. Wilson, <i>Manager, State Research Farm, Werribee</i> .                                      | 1     |
| H. J. Sims, M.Agr.Sc., B.Com., <i>Cerealists, Melbourne</i> .                                      | 7     |
| N. C. Killeen, B.Agr.Sc., <i>Manager, Rutherglen Research Station</i> .<br>(Tel. : Rutherglen 18). | 1     |
| J. G. Bath, B.Agr.Sc., <i>Agricultural Research Officer, Rutherglen</i> .                          | 7     |
| J. McC. McCann, B.Agr.Sc., <i>Manager, Mallee Research Station, Walpeup</i> . (Tel. : Walpeup 2D). | 1     |
| A. Morgan, B.Agr.Sc., <i>Senior Irrigation Officer</i> . (Tel. : Kerang 125).                      | 8     |
| R. L. Twentyman, B.Agr.Sc., <i>Senior Agrostologist</i> .  | 8     |
| Gwen R. Easton, B.Sc., <i>Seeds Analyst</i> .  | 8     |
| S. C. Powell, B.Agr.Sc., <i>Agrostological Research Officer</i> .                                  | 8     |
| R. H. Beattie, B.Agr.Sc., <i>Field Agrostologist, Werribee</i> .                                   | 8     |
| G. W. Hexter, B.Agr.Sc., <i>Field Agrostologist, Melbourne</i> .                                   | 8     |
| R. J. Newman, B.Agr.Sc., <i>Field Agrostologist, Warrnambool</i> .                                 | 8     |
| W. J. Hosking, B.Agr.Sc., <i>Assistant Agrostologist</i> .   | 8     |
| J. M. Crook, B.Agr.Sc., <i>Science Field Officer, Werribee</i> .                                   | 7     |
| L. F. Bartels, B.Agr.Sc., <i>Science Field Officer, Werribee</i> .                                 | 8     |
| K. R. Garland, B.Agr.Sc., <i>Science Field Officer, Kerang</i> .                                   | 8     |
| A. P. Mann, B.Agr.Sc., <i>Science Field Officer, Walpeup</i> .                                     | 7     |
| J. F. McHugh, B.Agr.Sc., <i>Science Field Officer, Rutherglen</i> .                                | 17    |
| R. Jardine, B.Agr.Sc., <i>Biometrician</i> .   | 29    |
| J. V. Mullaly, B.Agr.Sc., <i>Science Field Officer, Melbourne</i> .                                | 7, 29 |

## MAIZE, POTATOES, TOBACCO, FODDER CROPS

|   |   |
|---|---|
| W. J. B. McDonald, B.Agr.Sc., <i>Senior Plant Investigation Officer</i> . | 7 |
| J. A. Roberts, B.Agr.Sc., <i>Agricultural Research Officer</i> .          | 7 |



|  |   |
|--|---|
| W. A. Downie, B.Agr.Sc., <i>Agricultural Research Officer.</i>     | 7 |
| L. J. Harmsworth, B.Agr.Sc., <i>Agricultural Research Officer.</i> | 7 |
| G. H. Mattingley, <i>Potato Expert.</i>                            | 7 |
| F. L. French, B.Agr.Sc., <i>Science Field Officer.</i>             | 7 |

## PLANT PATHOLOGY

Swan Street, Burnley. (Tel. : Hawthorn 5017)

|   |            |
|---|------------|
| S. Fish, M.Agr.Sc., <i>Biologist.</i>                                 | 19, 20, 22 |
| C. R. Millikan, M.Agr.Sc., <i>Senior Plant Pathologist.</i>           | 20         |
| H. A. J. Pittman, B.A., B.Sc.Agr., Dip.Ed., <i>Plant Pathologist.</i> | 20         |
| L. L. Stubbs, M.Agr.Sc., <i>Plant Pathologist.</i>                    | 20         |
| R. D. Anderson, B.Agr.Sc., <i>Plant Pathologist.</i>                  | 20         |
| H. Freeman, B.Agr.Sc., <i>Plant Pathologist.</i>                      | 20         |
| Eileen E. Fisher, M.Sc., Ph.D., <i>Plant Pathologist.</i>             | 20         |
| D. E. Harrison, B.Agr.Sc., <i>Assistant Plant Pathologist.</i>        | 20         |
| J. W. Meagher, B.Agr.Sc., <i>Assistant Plant Pathologist.</i>         | 20         |
| P. T. Jenkins, B.Agr.Sc., <i>Assistant Plant Pathologist.</i>         | 20         |

## ENTOMOLOGY

Swan Street, Burnley. (Tel. : Hawthorn 5017).

|   |    |
|---|----|
| T. W. Hogan, M.Agr.Sc., <i>Senior Entomologist.</i>         | 19 |
| C. J. R. Johnston, B.Agr.Sc., <i>Entomologist.</i>          | 19 |
| H. B. Wilson, B.Sc., <i>Assistant Entomologist.</i>         | 19 |
| D. S. Morris, B.Agr.Sc., <i>Assistant Entomologist.</i>     | 19 |
| G. T. O'Loughlin, B.Agr.Sc., <i>Assistant Entomologist.</i> | 19 |
| S. Ehrlich, B.Agr.Sc., <i>Assistant Entomologist.</i>       | 19 |

## Live Stock Division

|  |                    |
|--|--------------------|
| R. J. de C. Talbot, B.V.Sc., <i>Chief Veterinary Officer and Head of Division.</i> | 1, 14, 15, 16, 17  |
| A. R. Grayson, B.V.Sc., <i>Senior Veterinary Officer.</i>                          | 14, 15, 16, 17     |
| D. S. Wishart, B.V.Sc., <i>Veterinary Research Officer.</i>                        | 13, 14, 15, 16, 17 |
| Tel. : Werribee 19)  |                    |
| S. A. Mountjoy, L.V.Sc., <i>Veterinary Officer, Warrnambool.</i>                   | 14, 15, 16, 17     |
| N. A. M. Wellington, B.V.Sc., <i>Veterinary Officer, Barinsdale.</i>               | 14, 15, 16, 17     |
| D. S. McQueen, B.V.Sc., <i>Veterinary Officer, Melbourne.</i>                      | 14, 15, 16, 17     |
| G. Nicol, B.V.Sc., <i>Veterinary Officer, Melbourne.</i>                           | 14, 15, 16, 17     |
| D. M. Flynn, B.V.Sc., <i>Veterinary Officer, Colac.</i>                            | 14, 15, 16, 17     |
| L. P. Prewett, B.V.Sc., <i>Veterinary Officer, Leongatha.</i>                      | 14, 15, 16, 17     |
| B. C. Hagelthorn, B.V.Sc., <i>Veterinary Officer, Benalla.</i>                     | 14, 15, 16, 17     |
| E. M. Brough, B.V.Sc., <i>Veterinary Officer, Kerang.</i>                          | 14, 15, 16, 17     |
| J. F. Eckel, B.V.Sc., <i>Veterinary Officer, Ballarat.</i>                         | 14, 15, 16, 17     |
| B. H. Rushford, B.V.Sc., <i>Veterinary Officer, Bendigo.</i>                       | 14, 15, 16, 17     |
| H. Tucker, B.V.Sc., <i>Veterinary Officer, Melbourne.</i>                          | 14, 15, 16, 17     |
| A. E. Engel, B.V.Sc., <i>Veterinary Officer, Melbourne.</i>                        | 14, 15, 16, 17     |
| W. A. Snowdon, B.V.Sc., <i>Veterinary Officer, Melbourne.</i>                      | 14, 15, 16, 17     |
| A. C. T. Hewitt, M.Agr.Sc., <i>Science Livestock Officer.</i>                      | 14, 15, 17         |
| Irene Stewart, B.Agr.Sc., <i>Science Field Officer, Werribee.</i>                  | 14, 15, 17         |
| A. D. North, B.Agr.Sc., <i>Science Field Officer.</i>                              | 14, 15, 17         |
| J. D. Stewart, B.Agr.Sc., <i>Science Field Officer.</i>                            | 14, 15, 17         |

|   | Subject    |
|---|------------|
| M. D. Hall, <i>Poultry Expert.</i>            | 14, 15, 17 |
| N. A. Bowman, <i>Sheep and Wool Expert.</i>   | 14, 15, 17 |
| L. A. Downey, <i>Pig Expert.</i>              | 14, 15, 17 |
| P. Wade, B.Sc., <i>Science Field Officer.</i> | 14, 15, 17 |

**Dairying Division**

|   |       |
|---|-------|
| T. M. Jensen, B.Agr.Sc., <i>Superintendent of Dairying, Head of Division.</i>   | 1, 17 |
| O. St. J. Kent, B.Sc., <i>Principal, School of Dairy Technology, Chief Dairy Research Officer.</i> (Tel. : Werribee 184). | 17    |
| H. M. Elder, B.V.Sc., <i>Senior Veterinary Milk Supply Officer.</i>   | 17    |
| R. M. Stephens, B.Agr.Sc., <i>Dairy Research Officer, Werribee.</i>   | 17    |
| A. G. F. Itzerott, B.Agr.Sc., <i>Dairy Research Officer, Werribee.</i>  | 17    |
| K. M. Sillcock, B.Agr.Sc., <i>Dairy Science Officer.</i>  | 17    |
| C. J. Bradbury, B.Agr.Sc., <i>Supervisor of Herd Testing.</i>   | 17    |
| W. J. Park, <i>Cheese Expert.</i>   | 17    |
| W. Collins, B.Sc. (Agr.), <i>Assistant Herd Survey Officer.</i>   | 17    |

**Horticultural Division**

|  |          |
|--|----------|
| J. M. Ward, <i>Superintendent of Horticulture, Head of Division.</i>                                       | 1, 9     |
| F. M. Read, M.Agr.Sc., <i>Chief Inspector of Horticulture.</i>   | 2, 9     |
| C. E. Cole, B.Agr.Sc., <i>Senior Horticultural Research Officer.</i>                                       | 2, 9, 29 |
| G. B. Tindale, B.Agr.Sc., <i>Cool Storage Research Officer.</i>  | 9, 30    |
| D. G. Quinn, <i>Viticulturist.</i> (Tel. : Rutherglen 18).   | 9        |
| G. W. Gayford, B.Agr.Sc., <i>Senior Horticultural Instructor.</i>  | 9        |
| R. S. Harper, B.Agr.Sc., <i>Manager, Horticultural Research Station, Tatura.</i> (Tel. : Tatura 34).       | 1, 9     |
| R. A. Mullett, B.Agr.Sc., <i>Manager, Horticultural Research Station, Scoresby.</i> (Tel. : Bayswater 57). | 1, 9     |
| P. F. Marriott, B.Agr.Sc., <i>Horticultural Research Officer.</i>  | 3, 4, 9  |
| D. M. McAlpin, B.Agr.Sc., <i>Horticultural Research Officer.</i>   | 2, 9     |
| A. G. Goudie, B.Agr.Sc., <i>Horticultural Research Officer, Tatura.</i>                                    | 2, 9     |
| C. R. Brough, B.Agr.Sc., <i>Horticultural Research Officer.</i>  | 2, 9     |
| R. F. Henderson, B.Agr.Sc., <i>Horticultural Instructor.</i>   | 7        |
| B. P. Krone, <i>Tomato Culturist.</i>  | 4, 9     |
| J. W. Berryman, B.Agr.Sc., <i>Assistant Horticultural Research Officer, Tatura.</i>                        | 9        |
| J. C. R. Keatley, B.Agr.Sc., <i>Assistant Horticultural Research Officer, Tatura.</i>                      | 9        |
| K. L. Avent, B.Agr.Sc., <i>Assistant Horticultural Research Officer, Scoresby.</i>                         | 9        |

**Chemistry Division**

|  |       |
|--|-------|
| W. R. Jewell, M.Sc., B.Met., F.R.I.C., <i>Chief Chemist.</i> | 1, 24 |
| F. Penman, M.Sc., <i>Deputy Chief Chemist.</i>               | 24    |
| F. H. Williams, M.Sc., Dip.Ed., <i>Senior Chemist.</i>       | 24    |
| J. K. M. Skene, M.Agr.Sc., <i>Soil Chemist.</i>              | 2, 24 |
| J. R. Freedman, B.Agr.Sc., <i>Soils Assistant.</i>           | 2, 24 |
| E. J. O'Brien, B.Sc., <i>Cereal Chemist.</i>                 | 24    |
| D. W. Wilson, B.Sc., <i>Chemist.</i>                         | 24    |

**Division of Agricultural Education**

- 605, Flinders Street, Melbourne. (Tel. : MU. 7366).
- G. B. Woodgate, B.A., Dip.Ed., *Superintendent of Agricultural Education, Head of Division.* 1
- E. T. Beruldsen, B.Sc. (Agr.), *Senior Inspector of Agricultural Education.* 1
- J. L. Provan, B.Agr.Sc., *Principal, Dookie Agricultural College.* 1  
(Tel. : Dookie Agricultural College 1).
- I. M. Tulloh, *Principal, Longerenong Agricultural College.* 1  
(Tel. : Horsham 331).
- T. H. Kneen, B.Agr.Sc., *Principal, School of Primary Agriculture, Burnley.* 1  
(Tel. : WA. 3030).
- E. B. Littlejohn, B.Agr.Sc., *Agricultural Science Instructor.*
- C. G. Scarff, B.Agr.Sc., *Agricultural Education Officer.*

**FORESTS COMMISSION OF VICTORIA**

- State Public Offices, Melbourne, C.2. (Tel. : F. 0234).
- F. G. Gerraty, Dip.For. (Cres.), *Chairman.* 1
- K. V. M. Ferguson, M.A., B.Sc.For. (Edin.), *Chief Technical Officer : organisation and supervision of research.* 10
- E. R. Torbet, Dip.For. (Canberra), *Fire Protection Officer : supervision fire protection research.* 10
- G. Weste, A.M.I.R.E. (Aust.), *Communications Officer : application of radio to fire protection.* 10, 28
- D. W. M. Paine, B.Sc.For. (Melb.) : *use of wetting agents in fire suppression and weed killers in fire prevention.* 10
- W. J. Zimmer, Dip.For. (Cres.), F.L.S., *Silviculturalist.* 10
- C. J. Irvine, B.Sc., *Forest Entomologist and Research Officer : control of insects and wood-rotting fungi.* 10, 19, 20
- Kathleen Smith, B.Sc. : *identification and production of wood rots in the laboratory ; decay in Eucalyptus regnans.* 20
- F. R. Moulds, B.Sc., Dip.For. (Cres.), M.F. (Yale), *Forest Economist.* 10
- E. J. Semmens, B.Sc., F.L.S., *Principal, School of Forestry, Creswick.* 10, 19, 20
- W. Litster, B.Sc.For. (Edin.), *Lecturer : growth studies.* 10
- L. A. Newman, B.Sc. (For.) (Adel.), Dip.For. (Oxon.), *Lecturer : growth studies.* 10

**THE UNIVERSITY OF MELBOURNE****The School of Agriculture**

- Carlton, N.3. (Tel. : F.0484, Extensions 233, 234).
- Prof. S. M. Wadham, M.A., *land utilisation.* 7, 8, 27
- Assoc. Prof. G. W. Leeper, M.Sc. : *soil chemistry.* 2, 24, 26
- G. H. Vasey, B.C.E. : *agricultural engineering, standardisation.* 28
- Yvonne Aitken, M.Agr.Sc. : *pasture plants—Trifolium subterraneum and Pisum sativum.* 4, 8
- P. S. Lang, B.Agr.Sc. : *land utilisation.* 17, 18
- A. J. McIntyre, M.Agr.Sc. : *sociological surveys.* 27
- L. H. P. Jones, B.Agr.Sc., Ph.D. : *soil chemistry.* 2



# COMMONWEALTH OF AUSTRALIA

B. V. Fennessy, B.Agr.Sc.  
K. P. Barley, B.Agr.Sc.

Subject  
8, 17, 18  
27

## School of Bacteriology

Carlton, N.3. (Tel. : F.0484, Extension 286).

V. B. D. Skerman, B.Agr.Sc. (Hons.), *Senior Lecturer* : growth of anaerobic organisms, bacterial decomposition of nitrates. 22, 25  
Miss J. B. Lack, B.Sc. : bacterial decomposition of nitrates. 22, 25

## Botany School

Carlton, N.3. (Tel. : F.0484).

Professor J. S. Turner. 1, 3, 25  
Assoc. Prof. E. McLennan. 2, 6, 20  
Dr. D. W. Goodall. 2, 3, 7, 29  
Dr. I. C. Cookson.  
Miss S. M. Fawcett. 3, 8, 12  
Miss J. Mathieson. 4, 20  
Miss M. Blackwood. 4  
Mr. C. G. Elliott. 3  
Mr. R. E. Winkworth. 3, 8  
Mr. J. Chinner. 10

## Department of Biochemistry

Carlton, N.3. (Tel. : F.0484).

Prof. V. M. Trikojus, Ph.D., M.Sc. : photo-sensitising pigments—hypericin. 24, 25  
Miss J. Millis, M.Sc. : pea proteins—vitamins. 25  
Miss M. E. Neville, B.Sc. : pea proteins—vitamins. 25

## Veterinary Research Institute

Story Street, Parkville, N.2. (Tel. : FJ. 2141).

H. E. Albiston, D.V.Sc., *Director, Veterinary Pathologist*. 1, 16  
E. M. Pullar, M.V.Sc., *Veterinary Pathologist*. 16  
C. J. R. Gorrie, B.V.Sc., *Veterinary Pathologist*. 16  
K. S. Chodnik, M.R.C.V.S., Ph.D., *Veterinary Pathologist*. 16  
M. E. Garland, B.Sc., Dip.Diet., *Milk Bacteriologist*. 22  
C. Cornish, B.Sc., *Milk Bacteriologist*. 22  
N. Swift, B.Sc., *Bacteriologist and Biochemist*. 22, 25

## QUEENSLAND

### DEPARTMENT OF AGRICULTURE AND STOCK

William Street, Brisbane, B.7. (Tel. : B.1541, B.5547).

A. F. Bell, M.Sc., D.I.C., A.A.C.I., *Under Secretary*. 1  
R. Veitch, B.Sc.Agr., B.Sc.For., F.R.E.S., *Assistant Under Secretary (Technical)*. 1

## Division of Plant Industry

## ADMINISTRATIVE AND GENERAL

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| A. F. Skinner, Q.D.H., <i>Soil Conservationist</i> . P.O. Box 102, Toowoomba. (Tel. : 1990).         | 2  |
| J. Rosser, B.Agr.Sc., <i>Assistant Soil Conservationist</i> . P.O. Box 116., Atherton. (Tel. : 105.) | 2  |
| M.H. Carlson, <i>Assistant to Soil Conservationist</i> . P.O. Box 56, Biloela. (Tel. : 10).          | 2  |
| P. B. McGovern, M.A., B.Sc., <i>Biometrician</i> .   | 29 |

## AGRICULTURE BRANCH.

|  |      |
|--|------|
| C. J. McKeon, Q.D.A., <i>Director</i> (on secondment).   | 1    |
| D. O. Atherton, M.Sc.Agr., <i>Assistant Director of Agriculture</i> .  | 1    |
| W. J. S. Sloan, M.Sc.Agr., <i>Senior Agronomist</i> .  | 1    |
| L. G. Miles, B.Sc.Agr., Ph.D., <i>Senior Plant Breeder</i> : wheat and grain sorghum.  | 4    |
| W. J. Cartmill, B.Sc., A.A.C.I., <i>Senior Soils Technologist</i> .  | 2    |
| R. W. Peters, <i>Plant Breeder</i> : cotton.   | 4    |
| J. A. Kerr, Q.D.A., <i>Plant Breeder</i> : peanuts, grain sorghum, sunflower. P.O. Box 124, Kingaroy. (Tel. : 350).            | 4    |
| S. Marriott, B.Sc.Agr., <i>Agrostologist</i> : dairy pastures.   | 8    |
| T. G. Graham, Q.D.A., <i>Agrostologist</i> : tropical pastures. Bureau of Tropical Agriculture, South Johnstone. (Tel. : 55.). | 8    |
| S. G. Burns, B.Sc.Agr., <i>Assistant Agronomist</i> : wheat. Warwick. (Tel. : 231.).   | 7    |
| J. L. Groom, B.Agr.Sc., <i>Assistant Agronomist</i> , Toowoomba. (Tel. : 1990.)  | 7    |
| E. C. Darley, B.Sc.Agr., <i>Assistant Agronomist</i> . P.O. Box 65, Laidley. (Tel. : 82).                                      | 7, 8 |
| A. C. Arvier, B.Agr.Sc., <i>Assistant Agronomist</i> , Kingaroy.   | 7    |
| J. W. Littler, B.Agr.Sc., <i>Assistant Agronomist</i> , South Johnstone.   | 7    |
| D. Rosser, B.Agr.Sc., <i>Assistant Plant Breeder</i> : wheat, Warwick.   | 4    |
| W. H. Bechtel, <i>Chief Adviser in Agriculture</i> .   | 7    |
| E. R. Ashburn, <i>Senior Adviser in Agriculture</i> , Warwick.   | 7    |
| C. S. Clydesdale, Q.D.A., <i>Senior Adviser in Agriculture</i> : wheat, linseed. Toowoomba.                                    | 7, 8 |
| N. E. Goodchild, <i>Senior Adviser in Agriculture</i> : pastures. P.O. Box 239, Mackay. (Tel. : 78).                           | 8    |
| A. Hamilton, H.D.A., H.D.D., <i>Senior Adviser in Agriculture</i> . P.O. Box 60, Mareeba. (Tel. : 97).                         | 7    |
| O. L. Hassell, <i>Senior Adviser in Agriculture</i> , Brisbane.  | 7, 8 |
| A. Nagle, Q.D.A., <i>Irrigationist</i> (on secondment)   | 7, 8 |
| K. V. Henderson, Q.D.A., <i>Senior Adviser in Agriculture</i> , Rockhampton. (Tel. : 2549).                                    | 7, 8 |
| R. A. Tarrant, Q.D.A., <i>Senior Adviser in Agriculture</i> . P.O. Box 99, Bundaberg. (Tel. : 741).                            | 7, 8 |
| W. G. Steele, Q.D.A., <i>Senior Adviser in Agriculture</i> : maize. Atherton.  | 7, 8 |

# COMMONWEALTH OF AUSTRALIA

Subject

## HORTICULTURE BRANCH

|   |       |
|---|-------|
| S. A. Trout, M.Sc., Ph.D., <i>Director</i> : transport and storage.                                     | 1, 30 |
| J. H. Smith, N.D.A., M.Sc., <i>Assistant Director</i> .   | 9     |
| K. M. Ward, M.Agr.Sc., <i>Senior Horticulturist</i> : citrus.   | 9     |
| S. E. Stephens, <i>Horticulturist</i> : tropical fruits and vegetables, Cairns. (Tel. : 2613).          | 9     |
| A. A. Ross, M.Agr.Sc., <i>Horticulturist</i> : citrus, Gayndah. (Tel. : 39).                            | 9     |
| H. M. Groszmann, B.Sc.Agr., <i>Horticulturist</i> : pineapples and vegetables. Brisbane.                | 4, 9  |
| J. H. Saint-Smith, B.Agr.Sc., <i>Physiologist</i> , Brisbane.   | 30    |
| C. G. Williams, <i>Supervisor, Preparation and Transport</i> .  | 30    |
| A. F. C. Henderson, B.Sc.Agr., <i>Assistant Soils Technologist</i> .                                    | 2     |
| G. W. J. Agnew, Q.D.A., Q.D.D., <i>Experimentalist</i> : papaws Nambour (Tel. 175).                     | 4, 9  |
| K. King, <i>Senior Adviser in Horticulture</i> : tropical fruits, Rockhampton. (Tel. 2549).             | 9     |
| P. Mitchell, <i>Senior Adviser in Horticulture</i> : pineapples, Nambour.                               | 9     |
| C. N. Morgan, Q.D.D., Q.D.S., <i>Senior Adviser in Horticulture</i> , Ormiston. (Tel. : Cleveland 154). | 9     |
| R. L. Prest, <i>Senior Adviser in Horticulture</i> , Brisbane.  | 9     |
| J. M. McG. Wills, <i>Senior Adviser in Horticulture</i> : bananas, Southport. (Tel. : 849).             | 9     |
| E. P. Williams, <i>Senior Adviser in Horticulture</i> : pineapples, Townsville. (Tel. : 310).           | 9     |
| M. H. Hannigan, Q.D.H., Q.D.D., <i>Senior Adviser in Horticulture</i> , Stanthorpe. (Tel. : 43.)        | 9     |

## REGIONAL EXPERIMENT STATIONS.

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| W. G. Wells, <i>Director</i> : general agronomy ; Brisbane.          | 1    |
| W. A. R. Cowdry, <i>Adviser</i> : general agronomy ; Ayr.            | 7, 8 |
| J. Harris, <i>Adviser</i> : maize and general agronomy ; Kairi.      | 7, 8 |
| J. G. J. Stevens, H.D.A., <i>Adviser</i> : summer cereals ; Biloela. | 7, 8 |
| T. K. Kelly, Q.D.A., <i>Adviser</i> : cereals ; Hermitage.           | 7, 8 |
| R. W. George, Q.D.A., <i>Experimentalist</i> : soils ; Biloela.      | 2    |

## BUREAU OF SUGAR EXPERIMENT STATIONS.

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| N. J. King, Dip.Ind.Chem., <i>Director</i> .  | 1  |
| L. G. Vallance, M.Sc., <i>Assistant Director</i> : soils technology.                        | 2  |
| R. W. Mungomery, <i>Officer in Charge</i> , Brisbane : entomology and plant pathology.      | 19 |
| J. H. Buzacott, M.Sc., <i>Senior Plant Breeder</i> : sugarcane. Meringa. (Tel. : 95.)       | 4  |
| C. G. Hughes, B.Sc.Agr., <i>Pathologist</i> : fungal and bacterial diseases of cane.        | 6  |
| D. R. L. Steindl, B.Sc.Agr., <i>Pathologist</i> : virus diseases.                           | 6  |
| G. Wilson, B.Sc., <i>Entomologist</i> : cane grubs. Meringa.                                | 19 |
| J. L. Clayton, M.Sc.App., <i>Senior Mill Technologist</i> .                                 | 28 |
| J. H. Nicklin, B.E., A.M.I.E. (Aust.), <i>Senior Technologist</i> : electrical engineering. | 28 |



# COMMONWEALTH OF AUSTRALIA

Subject

|   |    |
|---|----|
| D. L. McBryde, <i>Assistant Mill Technologist.</i>                          | 28 |
| B. G. Adkins, B.Sc.App., <i>Assistant Mill Technologist.</i>                | 28 |
| L. R. Brain, B.Sc.App., <i>Assistant Mill Technologist.</i>                 | 28 |
| C. B. Venton, B.Sc.App., <i>Assistant Mill Technologist.</i>                | 28 |
| A. G. Claire, <i>Assistant Mill Technologist.</i>                           | 28 |
| G. C. Bieske, B.Sc., <i>Analyst.</i>  | 2  |
| L. C. Home, A.A.C.I., <i>Analyst : sugarcane soils.</i>                     | 2  |
| G. Bates, H.D.A., <i>Senior Adviser in Cane Culture, Gordonvale.</i>        | 7  |
| (Tel. : 95).  | 7  |
| G. A. Christie, Q.D.A., <i>Senior Adviser in Cane Culture, Ayr.</i>         | 7  |
| (Tel. : 151.)   |    |
| H. G. Knust, <i>Senior Adviser in Cane Culture, Bundaberg.</i> (Tel. : 228) | 7  |
| C. G. Story, Q.D.A., <i>Senior Adviser in Cane Culture, Mackay.</i>         | 7  |
| Tel. : 17).   |    |
| W. R. Stern, B.Sc.Agr., <i>Assistant Agronomist, Brisbane.</i>              | 7  |

## AGRICULTURAL CHEMISTRY

|  |       |
|--|-------|
| M. White, M.Sc., Ph.D., A.A.C.I., <i>Agricultural Chemist.</i>                   | 1, 15 |
| C. R. von Stieglitz, F.A.C.I., <i>Officer in Charge, Plant Nutrition Section</i> | 2     |
| W. R. Winks, B.Sc., A.A.C.I., <i>Senior Toxicologist.</i>                        | 25    |
| F. Chippendale, M.Agr.Sc., <i>Chemist : soils.</i>                               | 2     |
| J. L. F. Foran, <i>Chemist : veterinary medicines.</i>                           | 16    |
| J. M. Harvey, M.Sc., A.A.C.I., <i>Chemist : biochemistry.</i>                    | 15    |
| K. W. Moir, B.Sc., <i>Analyst : biochemistry.</i>                                | 25    |
| W. T. Kelso, B.Sc., A.A.C.I., <i>Chemist : biophysics.</i>                       | 25    |
| F. Keogh, <i>Chemist : pest destroyers.</i>                                      | 24    |
| R. J. Clark, B.Sc., <i>Analyst.</i>  | 2     |
| R. H. Mathams, M.C., B.Sc., A.A.C.I., <i>Analyst : biochemistry.</i>             | 25    |
| C. W. R. McCray, B.Sc., <i>Analyst : toxicology.</i>                             | 25    |
| J. Pringle, <i>Analyst.</i>  | 24    |
| A. J. Rixon, B.Sc., <i>Analyst.</i>  | 2     |
| T. J. Beckman, B.Sc., <i>Analyst.</i>  | 2     |
| I. F. Fergus, B.Sc., <i>Analyst : soils.</i>                                     | 2     |
| J. D. B. Hughes, B.Sc., <i>Analyst : soils.</i>                                  | 2     |

## SCIENCE BRANCH

|   |       |
|---|-------|
| J. H. Simmonds, M.B.E., M.Sc., <i>Officer in Charge : diseases of tropical fruits.</i>                  | 6     |
| R. B. Morwood, M.Sc., <i>Senior Pathologist : diseases of cereals and peanuts.</i>                      | 6     |
| T. McKnight, M.Sc., <i>Pathologist : virus diseases.</i> P.O. Box 102, Toowoomba. (Tel. : 1990).        | 6     |
| W. A. McDougall, D.Sc., <i>Senior Entomologist.</i>   | 19    |
| J. A. Weddell, <i>Assistant Senior Entomologist : locusts, pests of vegetables and bananas.</i>         | 19    |
| A. R. Brimblecombe, M.Sc., <i>Entomologist.</i>   | 19    |
| R. C. Cannon, B.Sc.Agr., <i>Entomologist : citrus and pineapples, Nambour.</i> (Tel. : 175).            | 9, 19 |
| A. W. S. May, M.Agr.Sc., <i>Entomologist : fruit fly, cereal crops and deciduous fruits.</i> Toowoomba. | 19    |

|   |               |
|---|---------------|
| W. A. Smith, B.Sc., <i>Assistant Entomologist</i> : tobacco, cotton and grassland. Ayr. (Tel. : 151). | Subject<br>19 |
| C. T. White, M.Sc., <i>Government Botanist, Brisbane.</i> (Tel. : B.8243)                             | 3             |
| S. L. Everist, B.Sc., <i>Botanist</i> : pastoral botany and poisonous plants.                         | 3, 26         |
| W. D. Francis, <i>Botanist</i> : rain forest trees.   | 3             |
| S. T. Blake, M.Sc., <i>Assistant Botanist</i> : gramineae and cyperaceae.                             | 3             |
| L. S. Smith, B.Sc., <i>Assistant Botanist</i> : rain forest trees.                                    | 3             |

### Division of Animal Industry

|  |   |
|--|---|
| W. Webster, B.V.Sc., <i>Director, Brisbane.</i> (Tel. : B.8340). | 1 |
|--|---|

### ANIMAL HEALTH STATIONS

|  |    |
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| J. Legg, B.Sc., D.V.Sc., M.R.C.V.S., <i>Director of Research, Yeerongpilly.</i> (Tel. : J.Y.8505).         | 1  |
| A. K. Sutherland, B.V.Sc., B.S., <i>Senior Veterinary Pathologist, Yeerongpilly.</i>                       | 16 |
| L. G. Newton, B.V.Sc., <i>Officer in Charge, Animal Health Station, Oonoonba.</i> (Tel. : Townsville 484.) | 18 |
| P. J. O'Sullivan, B.Agr.Sc., <i>Parasitologist, Yeerongpilly.</i>  | 21 |
| A. T. Bell, B.V.Sc., <i>Government Veterinary Officer, Yeerongpilly.</i>                                   | 18 |
| G. D. Daly, <i>Assistant Bacteriologist, Yeerongpilly.</i>   | 22 |
| G. C. Simmons, B.Sc., <i>Assistant Bacteriologist, Yeerongpilly.</i>                                       | 22 |
| G. S. Cottew, B.Sc., <i>Assistant Bacteriologist, Yeerongpilly.</i>  | 22 |
| F. Lewis, B.Sc., <i>Assistant Bacteriologist, Oonoonba.</i>  | 22 |

### VETERINARY SERVICES.

|  |    |
|--|----|
| J. C. J. Maunder, B.V.Sc., <i>Chief Inspector of Stock and Director of Veterinary Services.</i> (Tel. : B.1541.) | 1  |
| O. H. Brooks, B.V.Sc., <i>Divisional Veterinary Officer, Rockhampton.</i> (Tel. : 2549).                         | 18 |
| A. L. Clay, B.V.Sc., <i>Divisional Veterinary Officer, Toowoomba.</i> (Tel. : 547.)                              | 18 |
| K. M. Grant, B.V.Sc., <i>Divisional Veterinary Officer, Townsville.</i> (Tel. : 310).                            | 18 |
| C. R. Mulhearn, B.V.Sc., <i>Divisional Veterinary Officer, Maryborough.</i> (Tel. 101).                          | 18 |
| A. R. Nott, B.V.Sc., <i>Divisional Veterinary Officer.</i>   | 18 |
| A. F. S. Ohman, B.V.Sc., <i>Divisional Veterinary Officer, Brisbane.</i> (Tel. : B.1541).                        | 18 |
| D. N. Sutherland, B.V.Sc., <i>Government Veterinary Officer, Kingaroy.</i> (Tel. : 350).                         | 18 |
| J. W. Ryley, B.V.Sc., <i>Assistant Veterinary Officer, Atherton.</i> (Tel. : 105.)                               | 18 |

### SHEEP AND WOOL BRANCH

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| G. R. Moule, B.V.Sc., <i>Officer in Charge.</i> (Tel. : B.1541). | 17 |
|--|----|

# COMMONWEALTH OF AUSTRALIA

Subject

## CATTLE HUSBANDRY BRANCH

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| R. D. Chester, B.V.Sc., <i>Officer in Charge, Brisbane.</i>  | 18 |
| R. W. Hewetson, B.V.Sc., <i>Assistant Husbandry Officer.</i> | 18 |
| J. G. Young, B.Agr.Sc., <i>Assistant Husbandry Officer.</i>  | 18 |

## PIG BRANCH

|                                       |    |
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| F. Bostock, <i>Officer in Charge.</i> | 17 |
|---------------------------------------|----|

## POULTRY BRANCH

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| P. Rumball, R.D.A., <i>Officer in Charge.</i>              | 17 |
| F. N. J. Milne, B.Sc., <i>Assistant Husbandry Officer.</i> | 17 |

## Division of Dairying

|   |   |
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## DAIRY RESEARCH BRANCH

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| F. G. Few, B.Sc., B.Sc.App., <i>Dairy Technologist.</i>                            | 17 |
| V. R. Smythe, B.Sc.Agr., <i>Dairy Technologist, Toowoomba</i>                      | 17 |
| W. F. Schubert, B.A., B.Sc., A.Ed., <i>Dairy Technologist.</i>                     | 17 |
| W. C. T. Major, B.Agr.Sc., <i>Dairy Technologist.</i>                              | 17 |
| M. B. Ferricks, B.Sc., A.A.C.I., <i>Analyst.</i>                                   | 24 |
| L. L. Muller, B.Sc., <i>Assistant Dairy Bacteriologist.</i>                        | 22 |
| L. G. Amos, B.Sc., <i>Analyst.</i>   | 24 |

## FIELD BRANCH

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| V. J. Brimblecombe, Q.D.D., <i>Senior Adviser, Warwick.</i>           | 17 |
| C. L. Moran, Q.D.A., Q.D.D., <i>Senior Adviser, Brisbane.</i>         | 17 |
| L. Moriarty, <i>Senior Adviser, Innisfail.</i>                        | 17 |
| M. R. Muller, Q.D.D., <i>Senior Adviser, Gympie.</i>                  | 17 |
| G. R. Sigley, Q.D.D., <i>Senior Adviser, Toowoomba.</i>               | 17 |
| W. A. G. Haylett, Q.D.D., Q.D.S., <i>Senior Adviser, Maryborough.</i> | 17 |
| P. McCallum, <i>Senior Adviser, Rockhampton.</i>                      | 17 |
| S. E. Pegg, Q.D.A., <i>Senior Adviser (Herd Testing).</i>             | 17 |
| D. F. Keith, <i>Grading Inspector (Butter and Cheese).</i>            | 17 |
| A. F. Moodie, Q.D.D., A.F.I.A., <i>Senior Adviser, Brisbane.</i>      | 17 |

## Division of Marketing

|  |   |
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| Brisbane. (Tel. : B.1541, B. 9767).                            |   |
| H. S. Hunter, <i>Director of Marketing.</i>                    | 1 |
| C. H. P. Defries, B.Com., A.F.I.A., <i>Assistant Director.</i> | 1 |

## MARKETING BRANCH

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| K. C. Guyatt, B.Com., A.A.U.Q., A.C.I.A., A.C.I.S., <i>Marketing Officer.</i> | 27 |
| H. G. Moon, Dip.Pub.Admin., <i>Marketing Officer.</i>                         | 27 |

## STANDARDS BRANCH

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| F. B. Coleman, <i>Standards Officer.</i>                      | 12 |
| A. C. Peel, Dip.Ind.Chem., <i>Technical Advisory Officer.</i> | 12 |



## DEPARTMENT OF PUBLIC LANDS

## Land Development Branch

Biological Section, Sherwood. (Tel. : U.7321).

A. P. Dodd, O.B.E., *Director*.

1, 19

J. Mann, *Entomologist*.

19

## Bureau of Investigation

Brisbane (Tel. : B.1186).

P. J. Skerman, M.Sc.Agr., B.A., *Agricultural Resources Officer*.

27

G. H. Allen, Q.D.A., *Technical Officer*.

27

## Sub-Department of Forestry

Brisbane. (Tel. : B.2133).

V. Grenning, *Director*.

1, 10

A. R. Trist, M.F., B.Sc., Dip.For., *Deputy Director*.

10

C. Haley, Dip.For., *Senior Research Officer* : Queensland trees and *Pinus* spp.

4, 10

M. A. Cameron, Dip.For., *Forester* : hoop pine and associated species.

4, 10

A. G. Hanson, B.Sc., Dip.For., *Forester* : silviculture and forest regeneration, North Queensland

4, 10

E. K. Miller, B.Sc., Dip.For., *Forester* : hoop pine and associated species.

4, 10

A. W. Gardner, B.Sc., Dip.For., *Forester* : hardwoods, South Queensland

4, 10

C. Ellis, B.E., *Officer in Charge* : Forest Products Research Branch.

11

C. J. J. Watson, Dip.For.Bot., *Investigations Officer* : timber utilisation.

11

K. V. Cokley, B.Sc., *Investigations Officer* : wood chemistry and preservation

11

E. J. Macksey, *Assistant* : seasoning of timber.

11

## DEPARTMENT OF PUBLIC INSTRUCTION

## Queensland Agricultural High School and College

Lawes, Queensland. (Tel. : Gatton 1.)

N. W. Briton, B.V.Sc., *Principal*.

1, 14, 15

W. W. Bryan, M.Sc.Agr., *Senior Lecturer in Plant Industry* : maize breeding

4

H. G. Sundstrom, B.V.Sc., *Senior Lecturer in Animal Husbandry* : animal nutrition.

17, 18, 21

E. C. Tommerup, M.Sc., A.A.C.I., *Lecturer in Agronomy* : agronomy.

7

J. W. Howie, *Lecturer in Horticulture* : horticulture.

9

## THE UNIVERSITY OF QUEENSLAND

## Department of Agriculture

Brisbane. (Tel. : B.2501).

- L. J. H. Teakle, B.Sc. (Agr.), M.S., Ph.D., A.A.C.I., *Professor of Agriculture, Dean of the Faculty of Agriculture and Acting Dean, Faculty of Veterinary Science.* 2
- F. A. Perkins, B.Sc.Agr., *Lecturer in Economic Entomology.* 19

## Department of Botany

Brisbane. (Tel. : B.2501).

- D. A. Herbert, D.Sc., *Professor of Botany.* 3, 7, 9, 10
- R. F. Langdon, M.Agr.Sc., *Lecturer in Botany and Plant Pathology.* 6, 8
- J. E. C. Aberdeen, M.Agr.Sc., *Lecturer in Botany.* 2, 6

## Department of Chemistry

St. Lucia. (Tel. : U.2021).

- H. L. Wood, M.Sc., A.A.C.I., *Lecturer in Agricultural Chemistry.* 2, 24

## SOUTH AUSTRALIA

## DEPARTMENT OF AGRICULTURE

Flinders Street, Adelaide. (Tel. : Central 6720).

- A. R. Callaghan, C.M.G., D.Phil., B.Sc., B.Sc.Agric., *Director.* 1
- R. C. Scott, R.D.A., *Chief Agricultural Adviser.* 1
- L. J. Cook, R.D.A., *Experimentalist : general agriculture.* 1
- J. D. McAuliffe, R.D.A., *Manager, Kybybolite Experiment Station.* 1
- (Tel. : Kybybolite 2).
- E. L. Orchard, R.D.A., *Manager, Turretfield Seed Wheat Farm.* 1
- (Tel. : Rosedale 7).
- H. R. Day, R.D.A., *Manager, Minnipa Seed Wheat Farm.* (Tel. : 1
- Minnipa 31).
- W. A. Michelmore, R.D.A., *Field Officer.* 12
- H. C. Nourse, R.D.A., *Field Officer.* 12
- M. R. Clark, R.D.A., *Field Officer.* 12
- R. C. Stanton, R.D.A., *Field Officer.* 12
- S. G. Williams, R.D.A., *Field Officer.* 12
- R. I. Herriot, B.Ag.Sc., *Soil Conservator.* 2
- J. A. Beare, B.Ag.Sc., *Assistant Soil Conservator.* 2
- R. H. F. Macindoe, O.B.E., M.R.C.V.S., L.V.Sc., *Chief Veterinary Officer.* 15
- A. H. Robin, B.V.Sc., *Deputy Chief Veterinary Officer.* 15
- C. T. McKenna, M.R.C.V.S., B.V.Sc., *Veterinary Officer.* 15
- W. S. Smith, B.V.Sc., *Veterinary Officer.* 15
- H. V. Chamberlain, B.V.Sc., *Veterinary Officer.* 15
- A. G. Strickland, M.Ag.Sc., *Chief Horticulturist.* 1
- H. K. Kemp, B.Ag.Sc., *Senior Horticultural Research Officer.* 0

# COMMONWEALTH OF AUSTRALIA

|  | Subject |
|--|---------|
| O. E. Halliday, <i>Manager, Berri Experimental Orchard.</i> (Tel. : Berri 15).                           | 9       |
| J. B. Harris, Dip.Hort. (Wisley), <i>Manager, Blackwood Experimental Orchard.</i> (Tel. : Blackwood 33). | 9       |
| J. P. Jennings, R.D.A., <i>Manager, State Viticultural Station.</i> (Tel. : Nuriootpa 161).              | 9       |
| M. B. Spurling, B.Ag.Sc., <i>Horticultural Research Officer : irrigation.</i> (Tel. : Loxton 127).       | 9       |
| W. B. Harris, B.Ag.Sc., <i>Horticultural Research Officer : deciduous fruits.</i>                        | 9       |
| B. G. Coombe, B.Ag.Sc., <i>Viticultural Research Officer.</i>  | 9       |
| R. R. Cant, B.Ag.Sc., <i>Horticultural Research Officer : citrus.</i>                                    | 9       |
| G. R. Edwards, B.Ag.Sc., <i>Horticultural Research Officer : vegetable crops.</i>                        | 9       |
| M. R. Till, B.Agr.Sc., <i>Horticultural Research Officer : irrigation.</i>                               | 9       |
| S. R. Klose, R.D.A., <i>Assistant Orchardist, Blackwood Experimental Orchard.</i>                        | 9       |
| R. L. Wishart, R.D.A., <i>Assistant Orchardist, Berri Experimental Orchard.</i>                          | 9       |
| H. E. Orchard, R.D.A., <i>Weeds Adviser.</i>   | 12      |
| J. O. Hatter, H.D.D., <i>Senior Dairy Adviser.</i>   | 17      |
| C. F. Anderson, <i>Chief Poultry Adviser.</i>  | 17      |
| A. A. McArdle, <i>Senior Poultry Adviser.</i>  | 17      |
| M. N. Jones, <i>Manager, Parafield Poultry Station.</i> (Tel. : Salisbury 4).                            | 17      |
| W. S. McAuliffe, <i>Chief Pig Husbandry Adviser.</i>   | 17      |
| R. R. Rudd, <i>Pig Husbandry Adviser.</i>  | 17      |

## THE UNIVERSITY OF ADELAIDE

### Waite Agricultural Research Institute

Private Mail Bag, Adelaide. (Tel. : U.A. 1191).

J. A. Prescott, C.B.E., D.Sc., *Director.* 1, 2, 26

### DEPARTMENT OF AGRONOMY.

|  |          |
|--|----------|
| H. C. Trumble, M.Agr.Sc., D.Sc., <i>Professor of Agronomy.</i> | 7, 8, 26 |
| A. T. Pugsley, B.Agr.Sc., M.Sc., <i>Plant Geneticist.</i>      | 4        |
| R. L. Crocker, D.Sc., <i>Grassland Ecologist.</i>              | 8        |
| Constance M. Eardley, B.Sc., <i>Systematic Botanist.</i>       | 3        |
| K. Woodroffe, B.Agr.Sc.  | 7, 8     |
| A. J. K. Walker, B.Agr.Sc.                                     | 8        |
| N. S. Tiver, B.Agr.Sc., M.Sc.                                  | 8        |
| G. M. E. Mayo, B.Agr.Sc.                                       | 4        |

### DEPARTMENT OF AGRICULTURAL CHEMISTRY.

|  |          |
|--|----------|
| J. A. Prescott, C.B.E., D.Sc., <i>Professor of Agricultural Chemistry.</i> | 1, 2, 26 |
| C. S. Piper, D.Sc., <i>Soil Chemistry Section.</i>                         | 2, 24    |
| R. J. Best, D.Sc., <i>Lecturer in Agricultural Chemistry.</i>              | 22, 24   |
| H. P. C. Gallus, M.Sc.   | 24       |



# COMMONWEALTH OF AUSTRALIA

Subject

## DEPARTMENT OF ENTOMOLOGY

|  |    |
|--|----|
| D. C. Swan, M.Sc., <i>Senior Entomologist in Charge.</i> | 19 |
| H. G. Andrewartha, M.Agr.Sc., D.Sc.                      | 19 |
| T. O. Browning, B.Sc.                                    | 19 |

## DEPARTMENT OF PLANT PATHOLOGY

|   |       |
|---|-------|
| D. B. Adam, B.Agr.Sc., <i>Senior Plant Pathologist in Charge.</i> | 6, 20 |
| N. T. Flentje, B.Agr.Sc., M.Sc.                                   | 6     |

## DEPARTMENT OF PLANT PHYSIOLOGY

|                                   |   |
|-----------------------------------|---|
| F. L. Milthorpe, M.Sc.Agr., Ph.D. | 3 |
|-----------------------------------|---|

## FARM DEPARTMENT

K. A. Pike, *Manager.*

(The Waite Institute is the headquarters of the Division of Soils and of the Oenological Research Unit of the Commonwealth Scientific and Industrial Research Organization.)

## Botany School

(Tel. : W. 3211.)

|   |      |
|---|------|
| J. G. Wood, Ph.D. (Cantab.), D.Sc., <i>Professor of Botany.</i>                   | 1, 3 |
| J. M. Black, A.L.S., <i>Systematic Botanist.</i>                                  | 3    |
| H. B. S. Womersley, M.Sc., <i>Lecturer in Cryptogamic Botany : algal ecology.</i> | 3    |
| C. M. Eardley, M.Sc., <i>Systematic Botanist : desert plants.</i>                 | 3    |
| R. L. Specht, M.Sc., <i>Research Fellow : ecology.</i>                            | 3    |
| M. R. Kerr Grant, B.Sc., <i>Demonstrator in Botany : plant physiology.</i>        | 3    |
| P. M. Sibley, B.Sc., <i>Junior Research Fellow : plant physiology.</i>            | 3    |
| M. R. Robinson, B.Sc., <i>Demonstrator in Botany : plant physiology.</i>          | 3    |
| P. Rayson, B.Sc., <i>Demonstrator in Botany : ecology.</i>                        | 3    |

## THE INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

Frome Road, Adelaide. (Tel. : W. 1601).

|                                 |    |
|---------------------------------|----|
| M. F. Pulsford, B.V.Sc., H.D.A. | 16 |
| J. T. Fearn, B.V.Sc.            | 16 |
| K. H. Clapp, B.Sc.              | 16 |

## WOOD AND FORESTS DEPARTMENT

Victoria Buildings, Flinders Street, Adelaide. (Tel. : Central 8261)

|   |           |
|---|-----------|
| B. H. Bednall, B.Sc. (For.), (Adelaide), <i>Head of Department.</i>                         | 2, 10, 11 |
| A. L. Pinches, Dip.For. (Adelaide) : silviculture ; management.                             | 2, 10, 11 |
| J. Thomas, B.Sc. (For.) (Adelaide), Dip.For. : silviculture, management.                    | 2, 10, 11 |
| A. J. S. Adams, B.Sc. (For.) (Adelaide) : silviculture ; management. (Tel. : Millicent 76). | 2, 10     |
| R. H. Davey, B.Sc. (For.) (Adelaide) : silviculture ; management. (Tel. : Wirrabara 3).     | 2, 10     |

## ROSEWORTHY AGRICULTURAL COLLEGE

|  |            |
|--|------------|
| Roseworthy. (Tel. : Roseworthy 2, 28).   |            |
| R. N. McCulloch, M.B.E., B.Sc., B.Sc.Agr., <i>Principal</i> .                  | 1          |
| P. G. Schinckel, B.V.Sc., R.D.A., <i>Senior Lecturer in Animal Husbandry</i> . | 14, 15, 18 |
| M. E. Dodson, B.V.Sc., <i>Veterinary Officer</i> .                             | 13, 14, 15 |
| J. C. Potter, B.Agr.Sc., <i>Supervisor of Fleece Testing</i> .                 | 15, 18     |
| A. Packham, B.V.Sc., <i>Investigation Officer, Animal Husbandry</i> .          | 14, 15     |
| N. R. McKeown, B.A., B.Sc. (Agr.), <i>Agronomist</i> .                         | 7, 8       |
| M. R. Krause, B.Agr.Sc., <i>Plant Breeder</i> .                                | 4          |
| R. H. Kuchel, B.Sc., R.D.Oen., <i>Oenologist and Senior Biologist</i> .        | 3, 5       |
| A. F. Twartz, B.Sc., Dip.Ed., <i>Senior Chemist</i> .                          | 5, 24      |
| J. L. Siegele, B.Sc., <i>Chemist</i> .   | 5          |
| J. V. Mertin, B.Agr.Sc., <i>Horticulturalist</i> .                             | 9          |
| D. H. S. Mellor, R.D.A., <i>Farm Superintendent, Engineering</i> .             | 28         |
| B. W. Bussell, R.D.A., H.D.D., <i>Instructor in Dairying</i> .                 | 17         |
| C. W. Hooper, R.D.A., <i>Instructor in Sheep Husbandry</i> .                   | 18         |
| K. B. Leske, B.Agr.Sc., <i>Investigation Officer, Rural Economics</i> .        | 27         |
| A. P. Bailey, B.Ec., <i>Investigation Officer, Rural Economics</i> .           | 27         |

## WESTERN AUSTRALIA

## DEPARTMENT OF AGRICULTURE

|  |               |
|--|---------------|
| St. George's Terrace, Perth. (Tel. : B. 9111).   |               |
| A. L. McKenzie Clark, L.V.S., <i>Acting Director of Agriculture</i> .  | 1             |
| H. W. Bennetts, C.B.E., D.V.Sc., <i>Principal, Animal Health and Nutrition Laboratories</i> . (Tel. : W.1990). | 1, 15, 16     |
| L. C. Snook, D.Sc., B.Sc. (Agr.), <i>Animal Nutrition Officer</i> .  | 13, 15        |
| D. H. Curnow, B.Sc. (Hons.), <i>Biochemist</i> .   | 15, 25        |
| J. E. Peterson, B.V.Sc., <i>Veterinary Pathologist</i> .   | 15, 16        |
| A. W. Braden, B.Sc. (Hons.), <i>Biochemist</i> .   | 13, 15, 25    |
| B. D. Stacy, B.Sc. (Hons.), <i>Assistant to Animal Nutrition Officer</i> .                                     | 15, 25        |
| C. R. Toop, B.V.Sc., <i>Acting Chief Veterinary Surgeon</i> .  | 1, 16         |
| G. H. Burvill, M.Agr.Sc., <i>Commissioner of Soil Conservation</i> . (Tel. : B.2431).                          | 1, 2          |
| L. C. Lightfoot, B.Sc. (Agr.), <i>Assistant Commissioner of Soil Conservation</i> .                            | 2             |
| I. Thomas, <i>Superintendent of Wheat Farming</i> .  | 1, 7          |
| F. L. Shier, B.Sc. (Agr.), <i>Assistant Superintendent of Wheat Farming and Fat Lamb Adviser</i> .             | 7, 8, 14, 18  |
| W. P. Cullinane, B.Sc. (Agr.), <i>Assistant Cereal Research Officer</i> .                                      | 24            |
| E. R. Watson, B.Sc. (Agr.), <i>Plant Geneticist</i> .  | 4             |
| D. R. Bateman, <i>Farm Manager and Plant Breeder</i> . (Tel. : Wongan Hills 23).                               | 1, 4          |
| H. R. Powell, B.Sc. (Agr.), <i>Superintendent of Horticulture</i> .  | 1, 9          |
| M. Cullity, B.Sc. (Agr.), <i>Superintendent of Dairying</i> .  | 1, 14, 15, 17 |
| H. G. Elliott, Dip.Agr., <i>Agrostologist</i> .  | 8             |

## COMMONWEALTH OF AUSTRALIA

|   | Subject |
|---|---------|
| K. Needham, B.Sc. (Agr.), <i>Agricultural Adviser</i> : dairy chemistry and bacteriology.           | 22, 24  |
| T. C. Dunne, Ph.D., B.Sc. (Agr.), <i>Plant Nutrition Officer</i> . (Tel. : 1, 2, 9, 30 B.2431).     |         |
| S. T. Smith, B.Sc. (Agr.), <i>Research Officer</i> .  | 2, 7    |
| J. Parish, B.Sc. (Agr.), <i>Agricultural Adviser</i> .  | 2, 8    |
| W. P. Cass Smith, B.Sc. (Agr.), <i>Government Plant Pathologist</i> .                               | 1, 6    |
| H. L. Harvey, B.Sc. (Agr.), <i>Assistant Plant Pathologist</i> .                                    | 6       |
| Olga M. Goss, B.Sc. (Hons.), <i>Assistant Plant Pathologist</i> .                                   | 6       |
| R. Doepel, B.Sc. (Agr.), <i>Assistant Plant Pathologist</i> .                                       | 6       |
| E. T. Morgan, <i>Chief Adviser, Vegetable Industry</i> .  | 1, 9    |
| J. M. Allan, B.Sc. (Agr.), (Hons.), <i>Officer in Charge, Tobacco Industry</i> . (Tel. Manjimup 66) | 1, 9    |
| C. F. H. Jenkins, M.A., <i>Government Entomologist</i> . (Tel. : B.2431).                           | 1, 19   |
| P. N. Forte, B.Sc. (Agr.), <i>Assistant Government Entomologist</i> .                               | 19      |
| F. E. Ryan, B.Sc. (Agr.) (Hons.), <i>Assistant Government Entomologist</i> .                        | 19      |
| C. A. Gardner, <i>Government Botanist</i> . (Tel. : B.6702).  | 1, 3    |
| G. R. W. Meadly, <i>Assistant Government Botanist</i> .   | 3, 12   |

## FORESTS DEPARTMENT

|  |       |
|--|-------|
| Cathedral Avenue, Perth. (Tel. : B.9121).  |       |
| T. N. Stoate, M.Sc., Dip.For., <i>Conservator of Forests</i> : silvicultural research.                           | 1, 10 |
| W. R. Wallace, Dip.For., <i>Senior Divisional Forest Officer in charge of Fire Weather Station, Dwellingup</i> . | 1, 10 |
| J. H. Harding, <i>Statistical Officer</i> .  | 29    |
| D. H. Perry, <i>Research Assistant</i> : pine nutrition.   | 2, 10 |
| A. Hatch, <i>Assistant Soil Survey Officer</i> .   | 2     |

## UNIVERSITY OF WESTERN AUSTRALIA

### Institute of Agriculture

|   |            |
|---|------------|
| Nedlands. (Tel. : WM.1803).   |            |
| E. J. Underwood, Ph.D. (Cantab.), B.Sc.Agr., <i>Director and Professor of Agriculture</i> .         | 1, 15, 25  |
| A. M. Stewart, B.Sc.Agr., <i>Assistant Director</i> : animal husbandry ; husbandry ; wool research. | 15, 17, 18 |
| R. J. Moir, B.Sc.Agr. : agricultural bacteriology.  | 13, 22     |
| Sheila Rowley, M.A. : rural economics.  | 27         |
| D. K. Giles, B.Sc.Agr. : rural economics.   | 27         |
| A. Meacham, B.A. : rural economics.   | 27         |
| A. J. Millington, M.Sc.Agr., <i>Merchants Research Fellow</i> : plant genetics.                     | 4, 8       |
| K. W. Finlay, B.Sc.Agr. : plant genetics.   | 4, 9       |
| A. W. Humphries, B.Sc.Agr. : plant genetics.  | 4, 8       |
| P. R. Scutt, M.Sc. : biochemistry.  | 25         |
| J. W. Lee, B.Sc. : biochemistry.  | 25         |
| J. R. Adamson, B.Sc., : biochemistry.   | 25         |
| Nancy Hardwicke, B.Sc. : biochemistry.  | 5, 25      |



## COMMONWEALTH OF AUSTRALIA

|   |         |
|---|---------|
|   | Subject |
| P. Holmes, B.Sc. : biochemistry.              | 25      |
| D. R. Drover, B.Sc. : soils                   | 2       |
| J. R. Loneragan, B.Sc. : plant nutrition.     | 3       |
| June East, M.Sc. : animal physiology.         | 13      |
| V. S. Williams, B.Sc.Agr. : animal nutrition. | 15, 22  |
| Rhona Smythe, B.Sc.Agr. : animal nutrition.   | 15, 25  |
| M. C. Nottle, B.Sc.Agr. : animal nutrition.   | 15      |

*Officers of the Commonwealth Scientific and Industrial Research  
Organization stationed at the Institute of Agriculture, University  
of Western Australia.*

|  |      |
|--|------|
| R. C. Rossiter, B.Sc.Agr. : agrostology.   | 2, 8 |
| E. Bailey, B.Sc.Agr. : plant introduction. | 7, 8 |
| M. Wallace, B.Sc. : entomology.            | 19   |
| R. Smith, B.Sc.Agr. : pedology.            | 2    |
| E. W. Boehm, B.Sc.Agr. : pedology.         | 2    |
| A. G. Turton, B.Sc. : soil chemistry.      | 2    |
| R. W. Spencer, B.Sc. : hydrology.          | 25   |

### Botany Department

Nedlands. (Tel : WM.2481).

|   |      |
|---|------|
| B. J. Grieve, M.Sc., Ph.D., <i>Reader and Head of Department :</i><br>ecology ; plant physiology. | 1, 3 |
| Alison Baird, B.Sc. : general botany.   | 3    |
| G. G. Smith, B.Sc. : general botany.  | 3    |
| Rona Stewart, B.Sc. : plant pathology.  | 6    |

## TASMANIA

### DEPARTMENT OF AGRICULTURE

Box 673e, G.P.O., Hobart. (Tel. : Hobart 7441).

|  |   |
|--|---|
| H. C. Smith, <i>Secretary for Agriculture :</i> general direction of de-<br>partmental activities.   | 1 |
| F. W. Hicks, H.D.A., <i>Superintendent of Extension and Technical<br/>Services :</i> responsible for research in agronomy, entomology,<br>plant pathology, horticultural and dairying divisions and in<br>extension service. | 1 |

### Veterinary Division

|  |        |
|--|--------|
| G. K. Meldrum, B.V.Sc., <i>Chief Veterinary Officer :</i> administration<br>of animal health service.                        | 1      |
| A. F. Ryan, B.V.Sc., <i>Veterinary Pathologist :</i> parasitological pro-<br>blems.  | 21     |
| R. J. Green, B.V.Sc., <i>Senior Veterinary Officer :</i> epidemiology<br>and nutrition.                                      | 15     |
| J. A. Dumaresq, B.V.Sc., <i>Veterinary Pathologist :</i> general labora-<br>tory investigations, nutrition and bacteriology. | 16, 22 |

**Dairying Division**

- J. T. Armstrong, B.Sc.Agr., *Chief Dairy Officer* : research on dairy produce ; breeding and production. 14
- H. V. Rees, B.Sc.Agr., *Dairy Bacteriologist* : bacteriological control and research on dairy produce. 14

**HORTICULTURAL DIVISION**

- P. H. Thomas, *Chief Horticulturist* : pome, drupe and berry fruits, vegetables and vegetable seeds, hops. 6, 9
- T. D. Raphael, Dip.Hort. (Cantab.), M.A. : berry fruits, apples, peas and vegetable seeds. 6, 9
- W. F. Walker, N.D.Hort. (Lond.), *Horticulturist* : pome and drupe fruits, vegetables, glasshouse culture, plant breeding. 4, 6  
9
- D. M. Hunt, B.Sc.Agr.

**Agronomy Division**

- E. F. Fricke, M.Ag.Sc., *Chief Agronomist*. 2, 8
- R. A. Scott, B.Sc., Ph.D., *Agronomist* : potato nomenclature and crop quality standards 7
- A. H. Woodforde, F.L.S., *Senior Seed Analyst* : wheat breeding. 4, 12
- J. C. Tilt, *Agronomist* : cereals. 7
- J. H. Wilson, B.Ag.Sc., *Agronomist* : potatoes. 7
- D. F. Paton, B.Ag.Sc., *Agronomist* : pastures. 8

**Entomology Division**

- L. W. Miller, M.Ag.Sc., F.R.E.S., *Chief Entomologist* : fruit and pasture pests ; general entomology. 19
- E. J. Martyn, B.Sc.Agr., *Assistant Entomologist* : pasture pests. 19
- N. M. Hudson, B.Sc., *Assistant Entomologist*. 19

**Plant Pathology Division**

- G. C. Wade, M.Ag.Sc., *Plant Pathologist* : fruit diseases and general plant pathology. 6
- E. Halpern, B.Agr.Sc., *Assistant Plant Pathologist* : general plant pathology. 6

**Extension Service**

- C. A. Holland, Dip.Agr. (A.U.C.R.), *Chief Extension Officer* : farm management and dissemination of technical findings to farming community. 1
- L. H. Radcl, Dip.Agr., *Senior Agricultural Officer* : as above for N.W. Tasmania. 1
- N. A. M. Kjar, H.D.A., *Senior Agricultural Officer* : as above for Northern Tasmania. 1
- J. T. Gemmell, C.D.A.D. (Glas.), N.D.D., *Senior Agricultural Officer* : as above for Southern Tasmania. 1

**FORESTRY COMMISSION**

12, Murray Street, Hobart. (Tel. : 6514).

|   |    |
|---|----|
| A. H. Crane, B.Sc., Dip.For., M.F., <i>Chief Commissioner.</i>    | 1  |
| H. Payne, <i>Assistant Commissioner.</i>                          | 1  |
| P. T. Unwin, Dip.For., : management.                              | 10 |
| J. M. Gilbert, B.For., Dip.For. : silviculture ; fire protection. | 10 |
| P. B. Casson, B.Sc., Dip.For. : silviculture.                     | 10 |

**UNIVERSITY OF TASMANIA**

Sandy Bay. (Tel. : 7448).

**Botany Department**

|  |         |
|--|---------|
| H. N. Barber, M.A., Ph.D., <i>Professor of Botany.</i> | 1, 3, 4 |
| W. M. Curtis, M.Sc., <i>Lecturer in Botany.</i>        | 3       |
| D. M. Paton, B.Sc., <i>Demonstrator in Botany.</i>     | 3, 4    |



# NEW ZEALAND

## DEPARTMENT OF AGRICULTURE

Subject

### Animal Research Division

J. F. Filmer, D.V.Sc., *Divisional Director* : deficiency diseases ; 1, 15, 16  
 photosensitivity.

#### WALLACEVILLE ANIMAL RESEARCH STATION, Wellington.

I. J. Cunningham, M.Sc., Ph.D., B.V.Sc., *Superintendent* : de- 1, 15, 25  
 ficiency diseases.

E. D. Andrews, M.Sc. : biochemistry ; trace elements. 15, 25

B. W. Boyes, B.Sc. : diagnostic bacteriology. 22

M. B. Buddle, B.V.Sc. : hereditary antigens of cattle anaerobic 22  
 diseases.

J. V. Evans, B.V.Sc. : experimental pathology. 16

D. B. Filmer, B.Sc. : parasitology ; immunity. 21

D. Flannery, B.Sc. : hereditary antigens of cattle. 22

A. B. Grant, B.Sc. : biochemistry ; rickets. 15, 25

R. A. Hall, B.Sc. : biochemistry. 25

D. L. Harrison, B.Sc. : biochemistry. 25

N. D. Jamieson, M.Sc. : biochemistry ; ketosis. 15, 25

J. L. Jebson, B.V.Sc. : diagnostic pathology. 16

S. W. Josland, Mus.B., A.N.Z.I.C. : bacteriology. 22

T. J. McClure, B.V.Sc. : bacteriology. 22

D. McFarlane, B.Sc., M.R.C.V.S. : pathology ; photosensitivity. 16

K. R. Macfarlane, B.Sc. : biochemistry. 25

I. G. McIntosh, B.Sc. : toxicology. 24, 25

M. D. Murray, M.R.C.V.S. : parasitology ; ectoparasites. 21

H. G. Osborne, B.V.Sc. : diagnostic pathology. 16

T. Palmer Jones, B.Sc. : apiculture. 19

J. J. G. Peddie, B.Sc. : diagnostic bacteriology. 22

C. S. W. Reid, M.Sc. : physiology ; photosensitivity. 13

R. M. Salisbury, B.V.Sc. : diagnostic bacteriology. 22

G. C. Salisbury, B.Sc. : bacteriology. 22

J. F. Scaife, M.Sc. : biochemistry ; trace elements. 25

J. B. Swan, B.V.Sc. : metabolic diseases. 13, 15

L. K. Whitten, B.V.Sc. : parasitology. 19, 21

E. W. Wright, M.Sc. : biochemistry ; radiochemistry. 25

#### RUAKURA ANIMAL RESEARCH STATION, Hamilton. (Tel. : 4790, 4791, 4792.)

C. P. McMeekan, Ph.D. (Cantab), B.Agr.Sc., *Superintendent*. 1, 13, 14, 15, 17

J. M. Baird, B.Sc. : mastitis. 16

M. P. Bartrum, M.Sc. : pasture digestibility. 24, 25

E. G. Bassett, M.Agr.Sc. : animal reproduction. 13, 14

N. Bindon, B.Sc., pasture digestibility. 24

W. H. Bishop, M.R.C.V.S. : general. 16, 18

N. T. Clare, M.Sc. : photosensitivity division. 24, 25

M. R. Coup, B.Sc. : pasture digestibility. 15, 24

T. M. Docker, M.R.C.V.S., B.Sc. (Vet.) : sterility-trick. 16, 23

J. J. Hancock, M.Agr.Sc. : animal genetics—Monozygotic twins. 13, 14, 17

|   | Subject        |
|---|----------------|
| J. P. James, M.R.C.V.S., B.Sc. (Vet.) : animal fertility.                 | 13, 14, 15     |
| R. J. Lancaster, M.Sc. : pasture digestibility.                           | 15, 24         |
| D. S. Leatham : photosensitivity.   | 25             |
| J. D. W. Monigatti, M.Sc. : chemistry of pastures.                        | 24             |
| S. J. Patterson, M.Sc. : pasture digestibility.                           | 24             |
| J. C. Percival, B.Agr.Sc. : animal nutrition—cattle.                      | 15, 18         |
| D. S. M. Phillips, M.Sc. : milking machines, etc.                         | 13, 28         |
| R. W. Roach, M.R.C.V.S., B.Sc. (Vet.) : mastitis.                         | 16, 22         |
| O. K. Sewell, M.Sc. : chemistry of pastures.                              | 24             |
| D. M. Smith, M.Agr.Sc. : pig breeding and nutrition.                      | 13, 14, 15     |
| S. K. Stephenson, B.Sc. : reproductive physiology.                        | 13, 24         |
| D. E. K. Walker, M.Agr.Sc. : growth and development of farm animals.      | 13, 14, 15, 17 |
| C. Wallace, Ph.D. (Cantab), M.A. (Oxon.) : reproductive physiology.       | 13             |
| L. R. Wallace, Ph.D., M.Agr.Sc. : animal nutrition.                       | 13, 14, 15, 17 |
| N. M. Wallace, B.Sc.  | 13, 17         |
| E. P. White, M.Sc. : organic chemistry.                                   | 24, 25         |
| W. G. Whittleston, M.Sc., A.R.I.C. : milk secretion and milking machines. | 13, 17, 28     |
| E. A. Clark, B.Agr.Sc. : sheep husbandry.                                 | 14, 15, 18     |
| J. C. Gerring, B.V.Sc. : general pathology.                               | 16             |
| D. D. Perrin, Ph.D., M.Sc. : biochemistry.                                | 24, 25         |

## Dairy Division

WELLINGTON (Tel. : 47-277)

|  |       |
|--|-------|
| H. A. Foy, <i>Director</i> : organisation generally. | 1, 17 |
|--|-------|

DAIRY LABORATORY, WALLACEVILLE, WELLINGTON. (Tel : 21)  
Upper Hutt.

|   |   |                  |
|---|---|------------------|
| G. M. Moir, Ph.D., M.Sc., F.R.I.C.,<br><i>Dairy Chemist</i> . | } Chemistry and Bacteriology<br>of Milk and Dairy Produce ;<br>also of water supplies, etc. | 17, 20<br>22, 25 |
| C. F. Denmead, B.Sc., <i>Chemist</i> .                        |   |                  |
| F. Bishop, <i>Assistant Chemist</i> .                         |   |                  |

DAIRY PRODUCE GRADING STORE, KING'S WHARF, Auckland.  
(Tel. : 42-387).

|  |  |        |
|--|--|--------|
| A. G. Frieberg, M.Sc., A.R.I.C.,<br><i>Chemist</i> . | } Chemistry and Bacteriology of<br>Milk and Dairy Produce and<br>Water Supplies. | 17, 25 |
| G. C. de Ath, M.Sc., <i>Chemist</i> .                |  |        |

## Extension Division

WELLINGTON

|  |             |
|--|-------------|
| P. W. Smallfield, M.Agr.Sc., <i>Director</i> : organisation generally.   | 1           |
| J. W. Woodcock, N.D.A., <i>Assistant Director</i> : organisation generally.  | 1           |
| J. H. Claridge, B.Agr., Dip.Agr. (Lincoln), <i>Agronomist</i> : types and strains of seeds ; seed and crop production. | 7, 12       |
| S. H. Saxby, Dip.Agr. (Lincoln), <i>Agrostologist</i> : grassland investigation.                                       | 2, 3, 8     |
| P. B. Lynch, M.Agr.Sc., <i>Field Crop Experimentalist</i> : field experiments with pastures and crops.                 | 2, 7, 8, 12 |

|  | Subject     |
|--|-------------|
| J. A. S. Miller, B.Agr.Sc., <i>Instructor in Agriculture</i> : types and strains of seeds ; seed certification.  | 12          |
| K. Cottier, B.Agr.Sc., <i>Assistant Crop Experimentalist</i> : field experiments with pastures and crops.        | 2, 7, 8, 12 |
| O. G. Moore, Dip.Agr. (Lincoln), <i>Fields Instructor</i> : types and strains of seeds ; seed production.        | 12          |
| E. M. Ojala, M.Agr.Sc., Ph.D., B.A., <i>Rural Economist</i> : agricultural economics and farm management.        | 27          |
| L. W. Woods, M.A., <i>Assistant Rural Economist</i> : agricultural economics and farm management.                | 27          |
| R. H. Scott, B.Com., <i>Land Utilization Officer</i> : land utilization.   | 27          |
| W. N. Paton, <i>Senior Investigational Officer</i> : management and costing.                                     | 29          |
| D. A. Viggers, B.Com., M.S. (U.S.A.), <i>Rural Sociologist</i> : rural sociology.                                |             |
| J. V. White, B.A., <i>Field Economist</i> : management and costing.  | 29          |
| Miss J. G. Miller, M.A., <i>Research Statistician</i> : statistics.  | 29          |
| H. W. T. Eggers, A.M.I.E.E., <i>Engineer</i> .   | 28          |
| Miss M. Sutherland, B.Sc., <i>Farm Forestry Officer</i> : farm plantations.                                      | 10          |
| A. A. Ross, M.A., <i>Investigating Officer</i> : economics.  | 27          |
| Miss H. M. Stevens, B.Sc., <i>Assistant Farm Forestry Officer</i> : farm plantations.                            | 10          |
| PALMERSTON NORTH   |             |
| A. V. LITHGOW, <i>Officer-in-Charge, Seed Testing Station</i> : testing of seeds for purity and germination.     | 12          |
| C. J. Hamblyn, B.Agr., <i>Fields Superintendent</i> : organisation generally.                                    | 1           |
| C. Walker, H.D.A., <i>Assistant Fields Superintendent</i> : organisation generally.                              | 1           |
| P. D. Harkness, B.Agr.Sc., <i>Assistant Seed Research Officer</i> : testing of seeds for purity and germination. | 12          |
| Miss M. E. H. Cowen, B.Agr.Sc., <i>Seed Research Officer</i> : testing of seeds for purity and germination.      | 12          |
| E. M. Fraser, B.Sc., <i>Assistant Seed Botanist</i> : testing of seeds for purity and germination ; seed botany. | 12          |
| AUCKLAND   |             |
| J. E. Bell, Dip.Agr. (Lincoln), <i>Fields Superintendent</i> : organisation generally.                           | 1           |
| E. B. Glanville, Dip.Agr. (Lincoln), <i>Assistant Fields Superintendent</i> : organisation generally.            | 1           |
| J. M. Miller, B.A., <i>Field Economist</i> : management and costing.   | 29          |
| HAMILTON   |             |
| K. W. Todd, <i>Field Economist</i> : management and costing.   | 29          |
| CHRISTCHURCH   |             |
| C. C. Leitch, Dip.Agr. (Lincoln), <i>Assistant Fields Superintendent</i> : organisation generally.               | 1           |
| J. G. Crosbie, B.Agr.Sc., <i>Assistant Machinery Officer</i> : implement testing.                                | 28          |



## DUNEDIN

|  |       |
|--|-------|
| A. G. Elliott, <i>Fields Superintendent</i> : organisation generally.              | 1     |
| A. Stuart, B.Sc., <i>Assistant Fields Superintendent</i> : organisation generally. | 1     |
| A. H. Mouat, B.Com., <i>Assistant Investigating Officer</i> : economics.           | 27    |
| J. O. Wallace, <i>Seed Production Officer</i> : production of Brassica seeds.      | 7, 12 |

## TIMARU

|   |    |
|---|----|
| W. C. Stafford, Dip.Agr. (Lincoln), <i>Irrigation Officer</i> : irrigation. | 28 |
|---|----|

## SOIL FERTILITY RESEARCH STATION, HAMILTON.

|  |       |
|--|-------|
| R. E. R. Grimmett, M.Sc., <i>Superintendent</i> : soils and fertilizers.                   | 1     |
| I. L. Elliott, B.Agr.Sc., <i>Assistant Superintendent</i> : soils and fertilizers.         | 1     |
| D. F. Waters, M.Sc., <i>Senior Agricultural Chemist</i> : soils and fertilizers.           | 2     |
| E. B. Davies, M.Sc., A.R.I.C., Ph.D., <i>Agricultural Chemist</i> : soils and fertilizers. | 2     |
| K. J. McNaught, M.Sc., <i>Agricultural Chemist</i> : soils and fertilizers.                | 2     |
| F. B. Thompson, M.Sc., <i>Agricultural Chemist</i> : soils and fertilizers.                | 2     |
| K. F. Hoy, B.Sc., <i>Agricultural Chemist</i> : fertilizers.                               | 2     |
| R. K. Ward, B.Sc., <i>Agricultural Chemist</i> : weed control.                             | 12    |
| J. L. Grigg, M.Sc., <i>Agricultural Chemist</i> : soils and fertilizers.                   | 2     |
| R. E. Rose, M.Agr.Sc., <i>Microbiologist</i> : soils.                                      | 2, 12 |
| J. E. Allan, B.Sc., <i>Chemist</i> : soils and fertilizers.                                | 2     |
| R. W. Bailey, M.Sc., <i>Chemist</i> : soils and fertilizers.                               | 2     |
| F. D. Dorofaeffe, B.Sc., <i>Chemist</i> : soils and fertilizers.                           | 2     |
| D. E. Hogg, B.Sc., <i>Chemist</i> : soils and fertilizers.                                 | 2     |
| R. H. Jackman, B.Sc., <i>Chemist</i> : soils and fertilizers.                              | 2     |
| P. F. Noble, B.Sc., <i>Research Officer</i> : soils.                                       | 2     |
| R. L. Neilson, B.Sc., <i>Soil Biologist</i> : soils.                                       | 2     |

## Horticulture Division

## WELLINGTON

|   |            |
|---|------------|
| A. M. W. Greig, B.Sc., N.D.H. (N.Z.), <i>Director</i> : organisation of horticultural work generally.       | 1, 2, 6, 9 |
| W. T. Goodwin, N.D.H. (N.Z.), <i>Assistant Director</i> : organisation of horticultural work generally.     | 1, 2, 6, 9 |
| G. A. H. Helson, M.Sc., <i>Horticulturalist</i> : small fruits ; nursery ; flower and general horticulture. | 2, 6, 9    |
| A. R. Grainger, <i>Principal Horticultural Inspector</i> : fruit and vegetable standards.                   | 6, 9       |
| A. A. Powell, <i>Cool Storage Officer</i> : cold storage and refrigerated transport of fruit.               | 28, 30     |

## AUCKLAND

|  |      |
|--|------|
| F. Berry Smith, Dip. in Oenology (Roseworthy), <i>Viticulturist</i> : viticulture and wine-making. | 2, 9 |
| <i>Assistant Viticulturist</i> —Vacant.  |      |

## TE KAUWHATA

|  |   |
|--|---|
| A. W. Saxby, <i>Manager, Horticultural Station, Te Kauwhata</i> : viticulture and wine-making. | 9 |
|--|---|

## DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

## Head Office, Wellington

- F. R. Callaghan, M.A., *Secretary*. 1
- W. M. Hamilton, M.Agr.Sc., N.D.H. (N.Z.), D.Sc. (N.Z.), *Assistant Secretary* (Agriculture and Biology); general administration of agricultural and biological research; land utilisation; agricultural economics. 1, 2, 17, 27
- L. W. Tiller, B.Sc., A.N.Z.I.C., *Deputy Assistant Secretary* (Agriculture and Biology); general administration of agricultural and biological research; land utilisation; agricultural economics. 1, 2, 9, 30
- K. J. Mitchell, B.Agr.Sc., *Scientific Officer*: land utilisation; agricultural economics. 3, 8, 27

## Agronomy Division

Lincoln, Canterbury.

- J. W. Hadfield, H.D.A., *Director*. 1
- O. H. Frankel, D.Agr., M.Agr.Sc., F.R.S.N.Z., *Associate Director*. 4, 7
- M. A. Black, M.A. (Cantab.). 2, 4, 7, 8, 12
- C. M. Driver, M.Agr.Sc.: potatoes. 4, 7, 8, 22
- J. P. Malcolm, B.Agr.Sc.: barley. 4, 7
- F. C. Allen, B.Sc. 4, 7, 12
- D. E. Yen, M.Agr.Sc.: peas; lucerne. 4
- N. L. Shillito, Dip.Agr. and V.F.M. 7, 12
- W. G. Priestley, Dip. Hort. 9
- I. G. M. Forbes, B.Agr.Sc. 9
- M. E. Fairmaid, B.Agr.Sc.: oats. 4, 7
- H. W. Findon, Dip.Agr. and V.F.M. 7, 12
- J. P. B. Chapple. 4
- D. Keane. 7, 12

## Animal Ecology Section

Wellington.

- K. A. Wodzicki, M.Sc., Ph.D. (Cracow) }  
*Officer-in-Charge.* } Animal Ecology.  
P. C. Bull, B.Sc., *Zoologist*. }  
J. S. Watson, B.A. (Oxon.), *Zoologist* }

## Applied Mathematics Laboratory

Wellington.

- I. D. Dick, M.Sc., *Officer in Charge*. 29
- J. H. Darwin, M.Sc.: theoretical problems. 29
- P. J. Armstrong, M.Sc.: applied statistics. 29
- E. Milne, B.Sc.: computations. 29
- R. M. Williams, M.A. (N.Z.), B.A. (Cantab.). 29
- E. W. Jones, M.Sc.: large-scale computations. 29
- B. I. Hayman, M.Sc.: theoretical problems. 29
- P. Whittle, M.Sc.: theoretical problems. 29
- † H. R. Thompson, M.Sc.: applied statistics. 29
- \* G. M. Wright, M.Sc.: applied statistics. 29
- W. B. Taylor, M.Sc.: applied statistics. 29

† At Plant Diseases Division, Auckland.

\* At Wheat Research Institute, Lincoln College, Christchurch.

**Botany Division**

## Wellington

|   |       |
|---|-------|
| A. L. Poole, B.For.Sc., M.Sc., F.L.S., <i>Director</i> : forest ecology.  | 1, 3  |
| A. J. Healy, M.Ag.Sc., <i>Assistant Director</i> : taxonomy with special reference to the naturalised flora.                  | 1, 3  |
| Miss L. B. Moore, M.Sc., F.L.S., F.R.S. (N.Z.), <i>Senior Botanist</i> : ecology of denuded tussock-grassland ; marine algae. | 3     |
| V. D. Zotov, <i>Botanist</i> : taxonomy (especially of grasses) ; syn-ecology.  | 3, 26 |
| J. B. Hair, M.Sc., <i>Cytologist</i> : cytology of <i>Agropyron</i> .   | 3     |
| W. F. Harris, M.Sc., <i>Botanist</i> : pollen and peat investigations.  | 3     |
| Miss R. Mason, B.A., M.Sc., <i>Botanist</i> : investigations on seeds and water plants ; food habits of game birds.           | 3     |
| A. P. Druce, B.E., <i>Botanist</i> : vegetation studies with reference to erosion control.                                    | 3     |
| H. A. Connor, B.Sc., <i>Botanist</i> : posionous and medicinal plants ; grass ecotypes.                                       | 3     |
| M. H. Bannister, B.Sc., <i>Botanist</i> : dendrology of exotic forest trees particularly <i>Pinus radiata</i> .               | 3     |
| T. W. Rawson, B.Sc., <i>Herbarium Keeper</i> : taxonomy.  | 3     |
| N. T. Moar, B.Sc., <i>Assistant Botanist</i> : pollen and peat investigations.  | 3     |
| Miss H. E. Clark, B.Sc., <i>Assistant Botanist</i> : hay fever pollens.   | 3     |
| Miss A. P. Barker, M.Sc., <i>Assistant Botanist</i> : ecology of tussock grasslands.  | 3     |
| I. A. McNeur, Dip.Hort., <i>Technician</i> : plant propagation.   | 3, 9  |
| Miss N. M. Adams, <i>Technical Assistant</i> : botanical illustrations ; marine algae.  | 3     |
| B. G. Hamlin, <i>Technical Trainee</i> : taxonomy ; assistance with herbarium work.   | 3     |
| Mrs. R. E. Leatham, <i>Librarian</i> .  | 3     |
| R. R. Briggs, <i>Technician</i> : plot work on experimental area.   | 3     |
| J. L. Dryden, <i>Technical Assistant</i> : plot work on experimental area.  | 3     |

**PHORMIUM RESEARCH STATION**

## Moutoa.

|   |   |
|---|---|
| W. R. Boyce, M.Sc., <i>Botanist</i> : <i>Phormium</i> investigations.             | 3 |
| M. E. Roberts, M.Sc., <i>Assistant Botanist</i> : <i>Phormium</i> investigations. | 3 |

**Entomological Research Station**

## Nelson

|  |    |
|--|----|
| D. Miller, Ph.D., M.Sc., F.R.S. (N.Z.), F.R.E.S., F.L.S. (N.S.W.), <i>Director</i> . | 19 |
| L. J. Dumbleton, B.Sc. (For.), <i>Senior Entomologist</i> : general problems.        | 19 |
| B. B. Given, M.Sc., <i>Entomologist</i> : grass—grub parasites.                      | 19 |
| J. M. Kelsey, B.Sc., <i>Entmologist</i> : grass—grub ecology.                        | 19 |
| R. A. Cumber, Ph.D., <i>Entomologist</i> : <i>Phormium</i> entomology.               | 19 |
| E. S. Gourlay, <i>Entomologist</i> : parasite establishment.                         | 19 |
| P. L. Robertson, M.Sc., <i>Entomologist</i> : stored products insects.               | 19 |



|   |    |
|---|----|
| J. M. Hoy, M.Agr.Sc., <i>Entomologist</i> : grass—grub ecology. | 19 |
| A. W. Parrott, <i>Curator of Insect Collections</i> .           | 19 |
| A. C. Carson, <i>Technical Assistant</i> .                      | 19 |
| A. D. Lowe, <i>Technician</i> .                                 | 19 |

### Fruit Research Station

HEADQUARTERS, Owairaka, Auckland

|  |         |
|--|---------|
| J. D. Atkinson, M.Agr.Sc., <i>Director</i>   | 1, 3, 6 |
| E. G. Bollard, B.Sc., Ph.D. (Cantab.), <i>Plant Physiologist</i> : plant nutrition.  | 2, 3    |
| R. M. Davison, B.Sc., <i>Assistant Plant Physiologist</i> : plant growth substances.   | 3, 9    |
| D. W. McKenzie, B.Sc., <i>Assistant Pomologist</i> : rootstock and variety investigations of pome, stone and berry fruits.   | 9       |
| H. M. Mouat, B.Sc., <i>Pomologist</i> : rootstock and variety investigations of citrus and sub-tropical plants. (On leave studying at University of California, Los Angeles, U.S.A.) | 9       |
| C. A. S. Padfield, <i>Technical Officer</i> : fruit culture and storage.   | 9, 30   |

RESEARCH ORCHARD, Oratia, Auckland

|  |   |
|--|---|
| O. Winn, <i>Orchard Manager</i> : fruit culture. | 9 |
|--|---|

RESEARCH ORCHARD, Havelock North, Hawkes Bay.

|   |   |
|---|---|
| E. G. Craw, <i>Orchard Manager</i> : fruit culture. | 9 |
|---|---|

RESEARCH ORCHARD, Appleby, Nelson

|  |   |
|--|---|
| R. E. Robbins, <i>Orchard Manager</i> : fruit culture. | 9 |
|--|---|

RESEARCH ORCHARD, Earnscliffe, Otago

|  |   |
|--|---|
| J. E. Hawkins, <i>Orchard Manager</i> : fruit culture. | 9 |
|--|---|

### Grasslands Division

P.O. Box 623, Palmerston North.

|  |      |
|--|------|
| E. Bruce Levy, B.Sc., <i>Director</i> .  | 1, 8 |
| E. A. Madden, H.D.A., <i>Assistant Director</i> : soil conservation ; turf research ; hill country pasture research. | 8    |
| L. W. Gorman, M.Agr.Sc., <i>Senior Ecologist</i> : pasture ecology ; strain selection and testing.                   | 8    |
| A. J. McNeur, M.Agr.Sc., <i>Ecologist</i> : strain selection and testing.  | 8    |
| L. Corkill, B.Sc., M.Agr.Sc., <i>Senior Plant Breeder</i> .  | 4    |
| P. C. Barclay, B.Sc., <i>Plant Breeder</i> .   | 4    |
| L. B. Anderson, B.Sc., Dip. Dairy Farming M.A.C., <i>Plant Breeder</i> .   | 4    |
| P. D. Sears, B.Com., M.A., <i>Senior Field Ecologist</i> : pasture utilisation and ecology.                          | 8    |
| F. B. Sill, B.Agr.Sc., <i>Agrostologist</i> : pasture utilisation.   | 8    |
| R. A. S. Waters, B.Sc., <i>Asst. Agrostologist</i> : pasture ecology.  | 8    |
| B. R. Watkin, B.Agr.Sc., <i>Asst. Agrostologist</i> : field ecology.   | 8    |
| F. E. T. Suckling, Dip. Agr. M.A.C., <i>Agrostologist</i> : soil conservation and hill country pasture research.     | 8    |

|  | Subject |
|--|---------|
| K. W. Clark, Dip.Agr. M.A.C., <i>Technician</i> : soil conservation.   | 8       |
| C. A. Smith, B.Agr.Sc., <i>Asst. Agrostologist</i> : soil conservation.  | 8       |
| G. S. Harris, B.Sc., <i>Agrostologist</i> : soil conservation ; turf research ; hill country pasture research.                         | 8       |
| S. T. J. Coles, Dip.Hort. M.A.C., <i>Asst. Technician</i> : turf research.   | 8       |
| Nora C. Ongley, B.Sc., <i>Librarian</i> .  |         |
| J. G. McKee, B.Agr.Sc., <i>Agrostologist</i> : soil conservation ; hill country pasture research ; (stationed at Gisborne).            | 8       |
| <b>SUB-STATION, Lincoln</b>  |         |
| W. G. Thurston, B.Agr.Sc., <i>Agrostologist</i> : strain selection and plant breeding.   | 4, 8    |
| <b>SUB-STATION, Gore.</b>  |         |
| J. P. Lambert, M.Agr.Sc., <i>Agrostologist</i> : strain selection and plant breeding.  | 4, 8    |
| <b>Hop Research Station</b>  |         |
| Nelson   |         |
| A. S. Nash, B.Agr.Sc., <i>Director</i> .   | 7       |
| <b>Plant Chemistry Laboratory</b>  |         |
| P.O. Box 623, Palmerston North   |         |
| J. Melville, Ph.D., <i>Director</i> .  | 1       |
| B. W. Doak, D.Sc., <i>Assistant Director</i> : phytohormones and pasture plants.   | 2, 5    |
| *T. R. Vernon, Ph.D., <i>Microbiologist</i> : antibiotics.   | 2, 3    |
| E. O. C. Hyde, M.Sc., <i>Seeds Research Officer</i> .  | 8, 12   |
| N. O. Bathurst, M.Sc., <i>Plant Chemist</i> : nitrogen metabolism.   | 5       |
| A. T. Johns, Ph.D., <i>Microbiological Chemist</i> : symbiosis.  | 8, 25   |
| R. M. Allison, M.Sc., <i>Chemist</i> : chemistry of forage crops.  | 5, 7    |
| J. W. Lyttelton, M.Sc., <i>Physical Chemist</i> : plant proteins.  | 5       |
| R. P. Newbold, M.Sc., <i>Chemist</i> .   | 2       |
| H. B. Oakley, B.Sc., <i>Chemist</i> : antibiotics.   | 25      |
| R. M. Greenwood, M.Sc., <i>Chemist</i> : seeds.  | 5, 12   |
| J. L. Mangan, M.Sc., <i>Chemist</i> : nitrogen metabolism.   | 5       |
| G. W. Butler, M.Sc., <i>Chemist</i> : nitrogen metabolism.   | 5       |
| *M. H. Dye, B.Sc., <i>Microbiologist</i> : aerial spore surveys.   | 3       |
| Miss J. Munro, B.Sc., <i>Botanist</i> : symbiosis.   | 3, 8    |
| <b>Plant Diseases Division</b>   |         |
| Owairaka, Auckland   |         |
| G. H. Cunningham, C.B.E., Ph.D., D.Sc., F.R.S. (N.Z.), <i>Director</i> .   | 1       |
| E. E. Chamberlain, M.Sc., D.Sc., <i>Assistant Director</i> : plant virus disease investigations.                                       | 22      |
| W. D. Reid, B.Sc., Ph.D. (Edin.), <i>Senior Plant Bacteriologist</i> : legume cultures ; bacterial diseases of farm and orchard crops. | 22      |
| W. Cottier, M.Sc., D.Sc., <i>Senior Entomologist</i> : general entomology ; insect pests of fruit trees.                               | 19      |

\*Stationed at Plant Diseases Division, Auckland.

|   | Subject |
|---|---------|
| R. M. Brien, Dip.Agric. (Linc.), <i>Senior Mycologist</i> : general mycology; plant pathology.  | 20      |
| G. G. Taylor, M.Agr.Sc., <i>Senior Plant Pathologist</i> : spray investigations; bioassay of plant therapeutants.   | 6       |
| K. M. Harrow, M.Agr.Sc., <i>Senior Wood Technologist</i> : timber preservation.   | 11      |
| H. Jacks, M.Agr.Sc., <i>Plant Pathologist</i> : soil and seed disinfection.   | 6       |
| D. Spiller, B.Sc., <i>Entomologist</i> : biology and control of timber insects.   | 11, 19  |
| R. E. F. Matthews, M.Sc., Ph.D. (Cantab.), <i>Mycologist</i> : virus diseases, especially those affecting potatoes.   | 22      |
| F. J. Newhook, M.Sc., Ph.D. (Lond.), D.I.C., <i>Mycologist</i> : general mycology; field crop diseases; <i>Phormium</i> .                                       | 20      |
| Miss J. M. Dingley, M.Sc., <i>Assistant Mycologist</i> : taxonomy.  | 20      |
| R. A. Harrison, M.Sc., <i>Assistant Entomologist</i> : bioassay of household insecticides.  | 19      |
| P. B. Hutchinson, M.Sc., <i>Assistant Plant Bacteriologist</i> : bacterial diseases of farm and orchard crops (on leave at University of West Indies, Jamaica). | 22      |
| D. W. Dye, B.Agr.Sc., <i>Assistant Plant Bacteriologist</i> : bacterial diseases of farm and orchard crops.   | 22      |
| J. A. Geddes, B.Sc., <i>Assistant Plant Pathologist</i> : bioassay of plant insecticides (on leave studying at Oxford University, England).                     | 6       |
| P. R. Fry, M.Sc., <i>Assistant Mycologist</i> : virus diseases of plants.   | 22      |
| K. P. Lamb, B.Sc., <i>Assistant Entomologist</i> : pests of agricultural crops; fabric destroying insects.  | 19      |
| H. C. Smith, B.Agr.Sc., <i>Assistant Mycologist</i> : general mycology; field crop and vegetable diseases.  | 20      |
| I. A. M. Cruickshank, M.Sc., <i>Assistant Mycologist</i> : general mycology; field crop diseases; peas, linseed, linen flax.                                    | 20      |

## Soil Bureau

Wellington.

|  |   |
|--|---|
| L. I. Grange, D.Sc., A.O.S.M., F.R.S.N.Z., <i>Director</i> . | 2 |
| N. H. Taylor, <i>Assistant Director</i> : classification.    | 2 |

## SOIL SURVEYS

|   |   |
|---|---|
| C. F. Sutherland, <i>Soil Technician</i> , Auckland.  | 2 |
| I. J. Pohlen, M.A., <i>Senior Pedologist</i> , Hawkes Bay.  | 2 |
| H. S. Gibbs, M.Sc., <i>Senior Pedologist</i> , Wellington.  | 2 |
| C. S. Harris, B.Agr.Sc., <i>Senior Pedologist</i> , Northern South Island.                                  | 2 |
| E. J. Cutler, B.Sc., <i>Pedologist</i> , Southern South Island.   | 2 |
| J. D. Raeside, M.Sc., A.R.I.C., <i>Senior Pedologist</i> , Southern South Island (at present in the U.S.A.) | 2 |
| I. L. Baumgart, B.A., B.Sc., <i>Pedologist</i> , Auckland.  | 2 |
| C. G. Vucetich, B.Agr.Sc., <i>Pedologist</i> , Northern South Island.                                       | 2 |
| W. A. Pullar, B.Sc., A.O.S.M., <i>Pedologist</i> , Hawkes Bay.  | 2 |
| A. S. Wickens, B.Sc., <i>Pedologist</i> , Wellington.   | 2 |
| J. P. Fox, B.Sc., <i>Assistant Pedologist</i> , Northern South Island.                                      | 2 |
| J. D. McCraw, M.Sc., <i>Assistant Pedologist</i> , Southern South Island.                                   | 2 |
| J. D. Cowie, B.Sc., <i>Assistant Pedologist</i> , Wellington.   | 2 |
| E. F. Stokes, B.Agr.Sc., <i>Assistant Pedologist</i> , Auckland.  | 2 |



## SOIL CHEMISTRY

|  |       |
|--|-------|
| J. K. Dixon, M.Sc., Ph.D. (Lond.), D.I.C., F.R.I.C., <i>Chief Soil Chemist.</i>                          | 2, 25 |
| A. J. Metson, M.Sc., <i>Soil Chemist</i> : analytical methods.   | 2, 24 |
| W. B. Healy, M.Sc., <i>Assistant Soil Chemist</i> : analytical methods.                                  | 2, 24 |
| G. D. Gemmell, M.Sc., A.R.I.C., <i>Soil Chemist</i> : soil corrosion.                                    | 2, 24 |
| K. Strzemienski, Ph.D. (Cracow), Dip. Agric., <i>Soil Chemist</i> : phosphate in soils.                  | 2, 24 |
| Elsa B. Kidson, M.Sc., F.R.I.C., <i>Soil Chemist</i> : plant analysis. (Seconded to Cawthron Institute). | 2, 25 |
| H. R. Penhale, M.Sc., <i>Assistant Soil Chemist</i> : soil corrosion.                                    | 2, 24 |
| M. Fieldes, M.Sc. : physical chemistry.  | 24    |

## DISTRICT CHEMISTS

|  |       |
|--|-------|
| A. R. Browning, B.Sc., <i>Chemist, Auckland.</i>                               | 2     |
| R. J. W. McLaughlin, M.Sc., <i>Assistant Soil Chemist, Wellington.</i>         | 2     |
| R. B. Miller, M.Sc., A.R.I.C., <i>Soil Chemist, Southern South Island.</i>     | 2     |
| Frances B. Hurst, M.Sc., <i>Assistant Soil Chemist, Northern South Island.</i> | 2, 24 |
| W. M. H. Saunders, M.Sc., <i>Assistant Soil Chemist, Wellington.</i>           | 2, 24 |

## SOIL PHYSICS

|   |       |
|---|-------|
| K. S. Birrell, M.Sc., A.R.I.C., <i>Senior Physicist.</i>                  | 2, 28 |
| I. C. Luketina, B.Sc., <i>Soil Physicist, in relation to engineering.</i> | 28    |
| R. D. Northey, B.Sc., <i>Soil Physicist, in relation to engineering.</i>  | 28    |
| R. O. Packard, B.Sc., <i>Soil Physicist.</i>                              | 28    |
| P. L. Newland, B.Sc., <i>Soil Physicist, Auckland.</i>                    | 28    |
| B. H. Allely, B.Sc., <i>Assistant Physicist.</i>                          | 28    |

## SOIL BIOTICS

|   |      |
|---|------|
| A. C. S. Wright, B.Sc. (Hons. Leeds), <i>In Charge.</i> | 2, 3 |
| E. J. Gridley, <i>Technical Assistant</i> : pot work.   | 9    |
| H. W. Johnston, B.Sc., <i>Biologist.</i>                | 3    |
| J. D. Stout, M.A., <i>Assistant Microbiologist.</i>     | 2    |
| K. E. Lee, M.Sc., <i>Assistant Soil Biologist.</i>      | 2, 3 |

## Tobacco Research Station

Motueka.

|   |      |
|---|------|
| R. Thomson, H.D.A. : tobacco research.  | 1, 2 |
| — McLeod, B.Agr.Sc. : tobacco research. | 2, 4 |

## Wheat Research Institute

Christchurch

|   |   |      |
|---|---|------|
| O. H. Frankel, D.Agr., M.Agr.Sc., F.R.S.N.Z.,<br><i>Chief Executive Officer and Geneticist.</i> | } wheat breeding,<br>genetics and<br>agronomy | 4, 7 |
| L. G. L. Copp, <i>Plant Breeder.</i>  |   |      |
| T. B. Palmer, M.Agr.Sc., <i>Plant Breeder.</i>  |   |      |
| G. A. Thomas, <i>Farm Overseer.</i>   |   |      |

|  |   |           |
|--|---|-----------|
| E. W. Hullett, M.Sc., F.N.Z.I.C.,<br><i>Chief Chemist.</i> | } cereal chemistry ; milling<br>and baking. | 7, 24, 25 |
| L. H. Bird, M.Sc., A.N.Z.I.C., <i>Chemist.</i>             |   |           |
| R. Stern, Ph.D., A.N.Z.I.C., <i>Chemist.</i>               |   |           |
| G. Larson, <i>Travelling Baker.</i>                        |   |           |
| F. C. Harper, <i>Test Baker.</i>                           |   |           |
| R. Sutherland, <i>Experimental Miller.</i>                 |   |           |

## NEW ZEALAND FOREST SERVICE

|  |               |
|--|---------------|
| A. R. Entrican, A.A.S.E., A.M.I.C.E., <i>Director of Forestry.</i>   | 1, 11, 27, 28 |
| C. M. Smith, M.A. (N.Z.), B.Sc. (For.) (Edin.), <i>Chief Inspector of Forests.</i>   | 10            |
| W. C. Ward, M.Sc., B.Com., <i>Inspector in Charge, Commercial Division.</i>  | 11, 27        |
| F. W. Foster, B.A. (N.Z.), B.Sc. (For.) (Edin.), <i>Inspector in Charge, Management Division.</i>                          | 10            |
| V. C. Rapson, B.E., A.M.I.C.E., <i>Inspector in Charge, Engineering Division.</i>  | 28            |
| T. T. C. Birch, M.A. (Oxon.), <i>Inspector in Charge, Research and Development Division.</i>                               | 10            |
| J. S. Reid, M.Sc., <i>Engineer in Forest Products : forest products and utilisation ; wood technology ; forest botany.</i> | 3, 11         |
| H. R. Orman, B.Sc. : wood technology.  | 11            |
| D. R. Carr, B.Sc. (Bombay) : wood preservation.  | 30            |
| T. S. Thomson, B.A. (For.) (Oxon.) : soil conservation.  | 2             |
| M. B. Grainger, B.Com. : economics.  | 27            |
| A. P. Thomson, B.For.Sc. : forest survey.  | 10            |

## New Zealand Forest Research Institute

Private Bag, Whakarewarewa, Rotorua.

|   |       |
|---|-------|
| F. Allsop, M.Sc. (Sheff.), <i>Acting Officer in Charge : forest management.</i> | 10    |
| G. B. Rawlings, B.For.Sc. : pathology.  | 19    |
| A. C. Forbes, B.Sc., A.R.C.Sc. (For.) : botany.                                 | 3, 10 |
| J. T. Holloway, M.Sc. : ecology.  | 3, 10 |
| S. E. Masters, B.A. : forest survey.  | 10    |
| G. Duff, B.For.Sc. : forest mensuration.  | 10    |
| Miss J. E. M. Osborn, M.Sc. : mycology.   | 20    |
| G. R. Fenton, B.Sc. (Sheff.), B.A. (For.) (Oxon.) : silviculture.               | 10    |
| E. Y. Cutten, B.Sc. : forest management.  | 10    |
| F. L. Miller, B.Sc. (For.) (Bangor) : silviculture ; pedology.                  | 2, 10 |
| Miss N. M. Wilson, B.Sc. : entomology   | 19    |
| C. R. Cruttwell, B.Sc. (For.) (Edin.) : forest management.                      | 10    |
| J. W. Gilmour, M.Sc. : pathology.   | 20    |
| E. R. Lewis, B.Sc. : biometrics.  | 29    |
| Miss K. M. Lewis, B.Sc. : botany.   | 3     |

## CAWTHRON INSTITUTE

## Nelson

|  |         |
|--|---------|
| Sir Theodore Rigg, K.B.E., M.A., Hon. D.Sc., M.Sc., F.R.I.C., F.R.S. (N.Z.), <i>Director and Chief, Soils and Agriculture Department</i> : general charge soils, orchard and tomato investigations.                              | 1, 2, 9 |
| D. Miller, M.A., Ph.D., F.R.E.S., F.R.S. (N.Z.), <i>Assistant Director and Chief Entomologist</i> : general charge entomological investigations covering biological control of noxious weeds, parasitic control of insect pests. | 1, 19   |
| H. O. Askew, M.A., Ph.D., D.I.C., F.R.I.C., F.R.S. (N.Z.), <i>Chief Biochemical Department</i> : general charge plant chemistry ; tobacco, fruit, and minor element deficiency.  | 2, 5    |
| Miss K. M. Curtis, M.A., D.Sc., D.I.C., F.L.S., F.R.S. (N.Z.), <i>Chief Mycology Department</i> : diseases tobacco ; fruit ; hops and tomatoes.  | 20      |
| R. T. J. Blick, M.Sc., A.R.I.C., <i>Curator Museum and Scientific Photographer</i> .   |         |
| *Miss E. B. Kidson, M.Sc., F.R.I.C., <i>Soil Chemist</i> : soil and tomato investigations.   | 2       |
| E. Gourlay, <i>Entomologist</i> : biological control noxious weeds ; parasitic control insect pests.   | 19      |
| A. W. Parrott, <i>Curator, Insect Collections</i> .  | 19      |
| Miss J. Watson, M.Sc., A.R.I.C., <i>Research Chemist</i> : fruit investigations.   | 2       |
| Miss K. Currie, B.Sc., M.H.Sc., <i>Research Chemist</i> : tobacco investigations.  | 2<br>2  |
| R. J. Monk, B.Sc., <i>Research Chemist</i> : minor element deficiencies.   | 2       |
| Miss E. Sowerby, M.Sc., <i>Mycologist</i> : tobacco and tomato diseases.   | 20      |
| T. B. Christie, M.Sc., <i>Mycologist</i> : hop investigations.   | 20      |
| E. Chittenden, <i>Pedologist</i> : soil surveys and field experiments.   | 2       |
| L. Hodgson, <i>Assistant Soil Chemist</i> : soil surveys.  | 2       |
| D. J. Stanton, <i>Assistant Horticulturalist</i> : field investigations tomatoes and mineral deficiency studies.   | 9       |
| P. W. Brown, <i>Orchardist</i> .   | 9       |
| J. Gibbs, <i>Field Assistant</i> : soil surveys.   | 2       |
| W. C. Davies, Hon. F.R.P.S., <i>Hon. Photographer for Studies N.Z. Native Flora</i> .  | 3       |
| Miss R. G. Johnson, <i>Librarian</i> .   |         |
| Miss S. E. Armstrong, <i>Assistant Librarian</i> .   |         |

## CANTERBURY AGRICULTURAL COLLEGE

## Lincoln.

|   |    |
|---|----|
| E. R. Hudson, B.Agr.Sc., Dip. C.A.C., <i>Director</i> .   | 1  |
| J. W. Calder, M.Sc., B.Agr., Dip. C.A.C., <i>Assistant Director</i> : plant breeding ; herbage plants ; crops and general botany. | 12 |
| Prof. I. E. Coop, M.Sc., D.Phil. (Oxon.) : animal husbandry.  | 18 |
| A. H. Flay, M.Agr.Sc., B.Sc. : farm management.   |    |
| I. W. Weston, M.Sc., Ph.D. : farm economics.  | 27 |

\*Seconded from Soil Bureau, D.S.I.R.



|   | Subject |
|---|---------|
| J. W. McLean, M.Agr.Sc., B.V.Sc. : veterinary studies.            | 13      |
| E. P. Wills, B.A., L.L.M., M.Com. : agricultural law              |         |
| R. H. Bevin, B.Agr. : agriculture.                                | 12      |
| P. Stevens, Dip. C.A.C. : animal husbandry.                       | 18      |
| A. F. R. Adams, M.Sc., A.N.Z.I.C. : agricultural chemistry.       | 24      |
| L. Morrison, B.Sc. (Agr.) (Aberdeen) : entomology and parasites.  | 19      |
| H. E. Garrett, M.Agr.Sc. : farm management.                       |         |
| I. D. Blair, M.Agr.Sc., Ph.D. : plant pathology.                  | 6       |
| L. W. McCaskill, M.Agr.Sc., Dip. C.A.C. : rural education.        |         |
| A. W. Riddolls, B.E., B.Sc., A.M.N.Z.I.E. : agric. engineering.   | 28      |
| L. F. McElroy, N.D.H. : horticulture.                             | 9       |
| A. E. Henderson, B.Agr.Sc. : wool.                                | 18      |
| B. L. Elphick, B.Sc. (Hons.) (Lond.) : soils and manures.         | 2       |
| H. P. Schapper, Dip. V.F.M., Dip.Agr. (Dookie) : farm management. |         |
| F. L. Ward, Dip. V.F.M. : agriculture.                            | 12      |
| J. H. Glazebrook, B.Sc. (Hort.), N.D.H.                           | 9       |
| H. D. Orchiston, M.Sc., A.N.Z.I.C.                                | 2       |

### MASSEY AGRICULTURAL COLLEGE

Palmerston North.

|  |                |
|--|----------------|
| Prof. G. S. Peren, B.S.A. (Toronto), <i>Principal</i> : sheep and wool research.   |                |
| Prof. W. Riddet, B.Sc. (Agr.) (Glasgow), N.D.A. (Hons.), N.D.D. (Hons.) : dairy cattle and pig research.                               |                |
| Prof. I. L. Campbell, B.Agr.Sc. (N.Z.), Ph.D. (Missouri) : dairy cattle physiology.  | 17             |
| A. W. Hudson, B.Agr. (N.Z.), B.Sc. (N.Z.) : soil fertility and drainage problems.  | 2              |
| W. A. Jacques, B.Sc. (Wales), N.D.A. : arable crops and grass-land ; root development ; pampas ( <i>cortaderia selloana</i> ) studies. | 7, 8           |
| C. V. Fife, M.Sc. (N.Z.) : soil phosphate studies.   | 2              |
| O. F. Haylock, M.Sc. (N.Z.) : soil potassium studies.  | 2              |
| H. G. Hopewell, M.Agr.Sc. (N.Z.) : soil drainage.  | 2              |
| N. L. St. George, Dip. Agr. M.A.C. (N.Z.) : soil drainage.   | 2              |
| G. S. Robinson, B.Agr.Sc. (N.Z.) : arable crops and grasslands.  | 7, 8           |
| S. L. Green, M.Agr.Sc. (N.Z.) : dairy husbandry.   | 17             |
| A. Stewart, M.Agr.Sc. (N.Z.) : animal breeding ; dairy husbandry.  | 14, 17         |
| F. R. Barnes, B.Agr.Sc. (N.Z.) : pig husbandry ; milk secretion.   | 17             |
| J. N. Hodgson, B.Agr.Sc. (N.Z.), Dip. V.F.M. : dairy farm management.  | 17             |
| T. R. Ellett, B.Agr.Sc. (N.Z.) : dairy farm management.  | 17             |
| C. L. Goldstone, B.Agr.Sc. (N.Z.), A.N.Z.I.V. : sheep farm management ; sheep.   | 14, 15, 17, 18 |
| A. J. Gibson, B.Agr.Sc. (N.Z.) : sheep management and wool advisory service.   | 17, 18         |
| K. D. Watt : wool classing.  | 17             |
| A. L. Rae, M.Agr.Sc. (N.Z.) : inheritance of productivity and progeny testing (on leave).  | 14, 17         |
| R. A. Barton, Dip. Agr. M.A.C. (N.Z.) : meat and wool quality ; fertility.   | 14, 17         |

|  |                   |
|--|-------------------|
| H. Goot, M.Agr.Sc. (N.Z.) : wool quality ; inheritance studies ; progeny testing.  | Subject<br>14, 17 |
| B. G. Moodie, Dip.Agr. M.A.C. (N.Z.) : (Relieving).  | 17                |
| O. Phillips and W. R. R. Hewitt : sheep crosses for marginal country.  | 14, 17            |
| G. S. Wilson : sheep grazing trials ; milk supply of the ewe.  | 15, 17            |
| F. W. Dry, D.Sc. (Leeds) : morphology and development of the fleece ; oligogenes conditioning N-type fleece characterization.                                  | 13, 14            |
| J. S. Yeates, M.Sc., Ph.D. (N.Z.), Ph.D. (Cantab.) : plant propagation ; weed control.   | 3, 4, 9, 12       |
| J. A. Carnahan, M.Sc. (N.Z.) : ecological studies of plant competition.  | 3, 12             |
| J. H. Tetley, M.Agr.Sc. (N.Z.) : ecology of nematode parasitism in sheep.  | 17, 21            |
| Miss J. Robb, Dip.Agr. M.A.C. (N.Z.) : ecology of codling moth.  | 17, 19            |
| W. M. Webster, B.Sc., M.R.C.V.S. : sterility in rams : anaerobic infections in sheep.  | 3, 16, 22         |
| J. C. Newhook, M.R.C.V.S. : male infertility in farm animals.  | 13, 16            |
| B. A. Reynolds : anaerobic infections in sheep.  | 22                |
| C. R. Barnicoat, M.Sc., Ph.D. (Minnesota), F.R.I.C. : wear in sheep's teeth ; milk production in the Romney ewe ; dairy chemistry.                             | 15, 25            |
| W. A. McGillivray, M.Sc. (N.Z.) : vitamin metabolism of farm animals.  | 15, 25            |
| L. Jurd, M.Sc. (Sydney) : iodinated amino acids.   | 25                |
| R. W. Cawley, M.Sc. (N.Z.) : poultry nutrition.  | 15, 25            |
| J. H. Kissling : improvement of egg production in auto-sexing breeds.  | 14, 17            |
| K. C. Hockey, N.D.A. (N.Z.), F.R.I.H. (N.Z.) : typing of varieties of gooseberries, raspberries and blackcurrants ; ozone and its effects on glasshouse crops. | 9                 |

## NEW ZEALAND FERTILIZER MANUFACTURERS' RESEARCH ASSOCIATION (INC.)

|  |   |
|--|---|
| M. M. Burns, M.Sc., Ph.D. (Aberdeen) : <i>Director</i> . | 2 |
|--|---|

## THE DAIRY RESEARCH INSTITUTE (N.Z.)

P.O. Box 602, Palmerston North.

The workers at this Institute are engaged on problems concerned with the production of milk and its manufacture into dairy products. Special attention is being devoted to (a) the relation of foods, especially pasture grasses and clovers, to the flavour and composition of milk yielded by cows feeding thereon and to the quality of products manufactured from this milk ; (b) chemical and bacteriological changes in cheese-making and cheese-ripening ; (c) cheese and butter starters ; (d) factors influencing the quality of butter, and engineering problems in dairy factories.

|  |           |
|--|-----------|
| Prof. W. Riddet, B.Sc., N.D.A. (Hons.), N.D.D. (Hons.), <i>Director</i> .                    | 1, 15, 17 |
| F. H. McDowall, M.Sc. (N.Z.), D.Sc. (Lond.), A.R.I.C., F.N.Z.I.C.,<br><i>Chief Chemist</i> . | 24, 25    |

## NEW ZEALAND

|  | Subject    |
|--|------------|
| R. M. Dolby, M.Sc. (N.Z.), Ph.D. (Lond.), A.R.I.C., <i>Chemist</i> .                                       | 24, 25     |
| A. K. R. McDowell, M.Sc. (N.Z.), A.R.I.C., <i>Chemist</i> .  | 24         |
| W. R. Mummery, F.R.I.C., <i>Chemist</i> .  | 24         |
| H. R. Whitehead, D.Sc. (Leeds), A.R.I.C., <i>Chief Bacteriologist</i> .                                    | 22, 25     |
| G. A. Cox, M.Sc. (N.Z.), <i>Bacteriologist</i> .   | 22, 25     |
| J. H. Henson, B.Agr.Sc. (N.Z.), <i>Dairy Technologist</i> .  | 17, 22     |
| Miss B. D. Matthews, B.Sc. (N.Z.), <i>Assistant Bacteriologist</i> .                                       | 22         |
| D. S. Flux, M.Agr.Sc., <i>Chief Physiologist</i> .   | 13, 15, 17 |
| J. K. Scott, B.E. (Hons.), <i>Experimental Engineer</i> .  | 28         |
| J. A. Singleton, B.Sc., B.Agr.Sc. (N.Z.), <i>Dairy Factory Superintendent</i> (Department of Agriculture). | 17         |
| Miss E. J. Bush, B.Sc. (N.Z.), <i>Dairy Analyst</i> .  | 22, 24     |
| J. J. O'Dea, Dip. Dy. M.A.C., <i>Chief Buttermaker</i> .   | 17         |
| W. L. Harkness, Dip. Dy. M.A.C., <i>Chief Cheesemaker</i> .  | 17         |

## THE NEW ZEALAND CO-OPERATIVE DAIRY COMPANY LTD.

### Dairy Laboratory

Hamilton

|  |    |
|--|----|
| W. H. Udy, B.Sc. (Hons.) (Lond.), A.R.I.C., <i>Laboratory Supervisor</i> .               | 17 |
| A. G. Yarrall, <i>Assistant Bacteriologist</i> : condensed milk and milk powder quality. | 17 |
| J. V. Duncley, B.Sc., <i>Assistant Chemist</i> : vitamins in dairy products.             | 17 |

## NEW ZEALAND CO-OPERATIVE RENNET COMPANY, LTD.

### Laboratory

Eltham.

|  |        |
|--|--------|
| W. A. Snell, B.Sc., <i>Chief Chemist</i> : works control; processed cheese; general chemistry. | 17, 24 |
| G. F. Martin, B.Sc., A.N.Z.I.C.: rennet studies; general analytical dairy chemistry.           | 17, 24 |
| W. A. Ritchie, B.Sc.: rennet studies; general analytical dairy chemistry.                      | 17, 24 |



# UNION OF SOUTH AFRICA

## UNION DEPARTMENT OF AGRICULTURE

Pretoria.

### Division of Veterinary Services (Research)

|   | Subject |
|---|---------|
| P.O. Onderstepoort. (Tel. : 5-2411).  |         |
| G. v. d. W. de Kock, M.R.C.V.S., Dr. Med. Vet., D.Sc., <i>Director of Veterinary Services</i> : haematology and pathology problems, especially tuberculosis, theileriosis, etc. | 1, 16   |
| A. M. Diesel, M.R.C.V.S., <i>Deputy Director</i> : theileriosis and acar-<br>iasis.   | 16      |
| J. I. Quin, D.V.Sc., <i>Deputy Director</i> : physiology of the digestive<br>tract of ruminants ; nutrition ; photosensitization.   | 13, 16  |
| E. M. Robinson, F.R.C.V.S., Dr. Med. Vet., D.V.Sc., <i>Assistant<br/>Director</i> : bacteriology and serology ; anthrax, swine fever and<br>tuberculosis.                       | 22      |
| P. J. J. Fourie, M.R.C.V.S., Dr. Med. Vet. (Utrecht), <i>Sub-Director</i> :<br>meat inspection and milk problems ; porphyrin studies.   | 16      |
| R. A. Alexander, B.Sc. (Agr.), D.V.Sc., <i>Sub-Director</i> : virus<br>diseases and tissue culture.   | 22      |
| J. R. Scheuber, Dr. Med. Vet. : study of certain types of anaerobes<br>and researches on Black Quarter vaccine production.  | 22      |
| B. S. Parkin, B.A., M.R.C.V.S., D.Sc. : chemotherapy of trypan-<br>osomiasis and other diseases.  | 16      |
| S. W. J. van Rensburg, B.A., M.R.C.V.S., D.V.Sc. : sterility and<br>artificial insemination ; mastitis ; surgery.   | 16      |
| J. H. R. Bisschop, B.Sc. (Agr.), B.V.Sc. : mineral deficiency on<br>cattle breeding and animal husbandry ; meat research.   | 18      |
| H. Graf, B.Sc., D.V.Sc. : chemical pathology ; dips and dipping.  | 16      |
| J. D. W. A. Coles, B.V.Sc. : ophthalmic in cattle and sheep and<br>poultry diseases.  | 16      |
| R. M. du Toit, B.V.Sc. : ectoparasites and transmission experi-<br>ments with insects ; nagana investigation.   | 16, 19  |
| W. O. Neitz, D.V.Sc. : blood parasites of game and protozoal<br>diseases.   | 23      |
| C. Jackson, B.Sc., D.Sc. (S. Afr.), B.V.Sc. : anatomy and path-<br>ology, neoplasms.  | 13, 16  |
| M. Sterne, D.V.Sc. : botulism.  | 22      |
| K. C. A. Schulz, B.Sc., B.V.Sc., Dr. Med. Vet. : pathology.   | 16      |
| R. J. Ortlepp, M.A., Ph.D., D.Sc. : helminthology.  | 21      |
| M. W. Henning, M.R.C.V.S., D.Sc. : bacteriology (part time).  | 22      |
| J. W. Groenewald, M.Sc. (Agr.), D.Sc. (Agr.) : nutrition.   | 15      |
| T. F. Adelaar, B.V.Sc, toxicology and veld management.  | 16      |
| S. D. Rossouw, B.Sc.,<br>C. M. van Wyk, D.Sc. } sheep and wool.   | 17      |
| S. W. Bosman, B.Sc. (Agr.).   |         |
| N. Reinach, M.Sc. : biochemistry and nutrition.   | 25      |
| J. G. Louw, D.Sc. : biochemistry and nutrition.   | 25      |
| S. J. Myburgh, M.Sc. (Agr.) : biochemistry and nutrition.   | 25      |
| P. M. Bekker, M.Sc. : chemical pathology ; dips and dipping.  | 16, 24  |

## UNION OF SOUTH AFRICA

|  | Subject |
|--|---------|
| H. P. A. de Boom, B.V.Sc. : embryology and anatomy.                    | 13, 16  |
| R. Clark, D.V.Sc. : physiology.  | 13, 16  |
| A. G. Polson, D.Sc. : physical studies on virus diseases.              | 22      |
| W. D. Malherbe, B.V.Sc. : chemotherapy.                                | 16      |
| J. R. Malan, M.Sc. : chemical pathology ; dips and dipping.            | 16, 24  |
| M. de Lange, D.V.Sc. : sterility ; mastitis ; artificial insemination. | 16      |
| D. A. Haig, B.V.Sc. : virus diseases and tissue culture.               | 22      |
| G. D. Sutton, B.V.Sc. : anthrax.                                       | 22      |
| G. C. van Drimmelen, B.V.Sc. : contagious abortion.                    | 22      |
| N. C. Starke, D.V.Sc. : sterility ; artificial insemination.           | 16      |
| L. M. Wentzel, M.Sc. : botulism.                                       | 22, 24  |
| G. J. Truter, M.Sc. : biochemistry and nutrition.                      | 25      |
| Sybille I. Bodenstein, M.Sc. : biochemistry and nutrition.             | 25      |
| J. D. Smit, R.V.S. : pathology.  | 16      |
| P. G. J. Louw, D.Sc. : poisonous plants.                               | 24      |
| J. A. Minné, B.Sc. : chemical toxicology.                              | 24      |
| Gertrud Theiler, D.Sc. : ectoparasites.                                | 19      |
| A. S. Canham, D.V.Sc., F.R.C.V.S. : poultry diseases.                  | 16      |
| D. van der Reyden, B.A. : statistics.                                  | 29      |
| E. B. Kluge, B.V.Sc. : tsetse fly research.                            | 16, 19  |
| D. R. Hope, B.Sc. : chemical control of worm remedies. . .             | 24      |
| J. H. Dreyer, B.Sc. : sheep and wool.                                  | 17      |
| J. M. W. le Roux, B.V.Sc. : pathology.                                 | 16      |
| J. S. van Heerden, B.V.Sc. : sterility ; artificial insemination.      | 16      |
| K. E. Weiss, B.V.Sc. : virus diseases.                                 | 22      |
| P. W. Thorold, B.V.Sc. : bacteriology.                                 | 22      |
| W. C. Jansen, B.V.Sc. : protozoal diseases.                            | 23      |
| V. R. Kaschula, B.V.Sc. : poultry diseases.                            | 16      |
| S. W. van der Merwe, M.Sc. : dips and dipping.                         | 24      |
| W. A. Lombard, M.Sc. : biochemistry and nutrition.                     | 25      |
| P. J. Swart, M.Sc. : helminthology.                                    | 21      |
| G. Abraham, B.Com., M.Com. (statistics) : statistics.                  | 29      |
| J. J. Wessels, B.Sc. : biochemistry and nutrition.                     | 25      |
| P. J. van Rooy, B.Sc. : chromatography.                                | 22      |
| O. G. H. Fiedler, Dr. rer. nat. : ectoparasites.                       | 19      |

### Division of Chemical Services

|  |            |
|--|------------|
| J. P. van Zyl, B.A. (S.A.), Dr. Phil. (Göttingen), <i>Chief of Division</i> :<br>(Seconded to other duties.)       | 1, 2       |
| D. J. R. van Wyk, B.A. (S.A.), M.Sc. (Pretoria), <i>Acting Chief</i> .   | 1, 15, 24  |
| P. R. v. d. R. Copeman, B.A. (S.A.), Ph.D. (Edin.), <i>Officer in Charge, Johannesburg Government Labs.</i>        | 1, 24      |
| C. R. v. d. Merwe, B.A. (S.A.), M.Sc. (Pretoria), D.Sc. (Stell.),<br><i>Officer in Charge Pretoria Chem. Labs.</i> | 1, 2       |
| P. A. E. Kamerman, M.Sc., D.Sc. (Pretoria), <i>Officer in Charge, Cape Town Govt. Labs.</i>                        | 1, 24      |
| S. G. Shuttleworth, M.Sc., D.Sc., <i>Director of Leather Research Institute, Grahamstown.</i>                      | 1, 24      |
| J. V. Cutler, M.Sc.  | 12, 24, 30 |
| C. P. Naude, M.Sc., D.Sc.  | 2, 5       |

|                            | Subject |
|----------------------------|---------|
| A. Immelman, M.Sc.         | 5       |
| J. van Garderen, M.Sc.     | 2, 29   |
| H. G. K. Klintworth, M.Sc. | 2, 8    |
| F. Rosenstrauch, M.Sc.     | 2       |
| M. S. Steyn, M.Sc. (Agr.)  | 2       |
| P. A. Louw, B.Sc.          | 2       |
| H. P. Meyer, M.Sc.         | 2       |
| G. Murray, B.Sc.           | 2       |
| M. v. Z. Pellissier, M.Sc. | 2       |
| D. G. Wessels, M.Sc.       | 2, 7    |
| W. B. Goldschmidt, M.Sc.   | 2, 9    |
| C. van Rooyen, M.Sc.       | 2       |
| T. P. Pretorius, M.Sc.     | 29      |
| U. Schmidt, B.Sc.          | 2       |
| E. Fisher, M.Sc.           | 24      |
| R. Ludorf, M.Sc.           | 2, 24   |
| M. C. A. Nolte, M.Sc.      | 12, 24  |

### Division of Soil Conservation and Extension

(Tel. : 24881 Pretoria.)

|                                      |                               |
|--------------------------------------|-------------------------------|
| J. C. Ross, Ph.D., <i>Director</i> . | 1                             |
| T. F. Cronje, M.Sc. (Agr.)           | } <i>Assistant Directors.</i> |
| J. C. Fick, Ph.D.                    |                               |

### PRINCIPAL AND SENIOR PROFESSIONAL OFFICERS

|  |  |
|--|--|
| J. A. van Ransburg, B.Sc. (Agr.), : extension and animal husbandry.                      | 18   |
| R. de Toit, B.Sc. (Agr.) : weed control.   | 8  |
| J. D. de Wet, B.Sc. (Agr.), clubs and land service.                                      | 1  |
| J. Morris, B.Sc. : pastures.   | 8  |
| J. J. O. Pazzi, <i>Engineer</i> : agricultural engineering.                              | 28   |
| T. Mostert, B.Sc. (Agr.) : farming demonstrations and arable crops.                      | 7  |
| E. D. Adler, B.Sc. (Agr.) : publicity.   | 1  |
| A. G. S. du Toit, B.Sc. (Agr.)   | } <i>Officers-in-Charge, Natal Region.</i>             |
| A. J. v d. Berg, B.Sc. (Agr.)  |  |
| A. Campbell, B.Sc. (Agr.)  |  |
| K. E. W. Penzhorn, B.Sc. (Agr.)  | } <i>Officers-in-Charge, Orange Free State Region.</i> |
| G. H. Cronje, B.Sc. (Agr.)   |  |
| P. C. de Villiers, B.Sc. (Agr.), <i>Officer-in-Charge, Transvaal Region.</i>             | 1  |
| O. A. Langenegger, B.Sc. (Agr.)  | } <i>Officers-in-Charge, Eastern Cape Region.</i>      |
| J. C. S. Brandt, B.Ac. (Agr.)  |  |
| J. Joubert, B.Sc. (Agr.)   | } <i>Officers-in-Charge, Western Cape Region.</i>      |
| E. Rood, B.Sc. (Agr.)  |  |
| J. C. van der Walt, M.Sc. (Agr.)   |  |
| J. A. Pentz, <i>Officer-in-Charge, Drakensberg Conservation Area.</i>                    | 1  |
| Miss M. E. P. van Deventer, B.Sc. (Home Economics), <i>Chief Home Economics Officer.</i> | 1  |

### Division of Horticulture

|   |         |
|---|---------|
| F. G. Anderssen, B.Sc., Ph.D. : <i>Chief of Division, Pretoria.</i> (Tel. : 2-3221) : physiological bio-chemical problems in relation to horticultural crops. | 1, 2, 9 |
|---|---------|



# UNION OF SOUTH AFRICA

Subject

## SUB-TROPICAL HORTICULTURAL RESEARCH STATION,

Nelspruit, Eastern Transvaal. (Tel. : 36).

|  |          |
|--|----------|
| R. H. Marloth, B.A., M.Sc., Ph.D. : <i>Director</i> : citrus root-stock investigations growth problems subtropical fruits. | 1, 9, 12 |
| E. F. Malan, M.Sc. (Agr.) : cultural problems subtropical fruits.  | 9, 12    |
| C. J. Naude, M.Sc. (Agr.) : citrus fertilizer and horticultural nutritional problems.                                      | 2, 9     |
| H. R. Hojby, M.Sc. (Agr.) : breeding of fruits and vegetables.   | 4, 9     |
| J. A. van Blommestein, M.Sc. (Agr.) : vegetables production problems.  | 9, 12    |
| L. A. R. F. Rosselet, H.S.T.D., M.Sc. : soil microbiology in relation to horticultural problems.                           | 9, 12    |
| A. van der Meulen, Ir. D. Agr. : physiological and propagation studies of sub-tropical fruits.                             | 3, 9     |

## HORTICULTURAL RESEARCH STATION

Pretoria, Tel. 2-3221.

|   |          |
|---|----------|
| P. W. Vorster, M.Sc. (Agr.), D.Sc. (Agr.) : <i>Officer in Charge</i> : horticultural production problems and plant nutrition. | 1, 2, 9  |
| M. R. V. Reinecke, B.Sc. (Agr.), D.Sc. (Agr.) : general horticultural investigations.   |          |
| A. J. van der Merwe, B.Sc. (Agr.), D.Sc. (Agr.) : nutrition of horticultural crops.   | 2, 3, 9  |
| A. C. Bathurst, M.Sc. (Agr.), D.Sc. (Agr.) : horticultural nutritional studies.   | 2, 3, 9  |
| T. G. la G. Joubert, M.Sc. (Agr.) : breeding of vegetables.   | 4, 9     |
| E. L. Marais, B.Sc. (Agr.) : vegetable production problems.   | 9, 12    |
| J. C. Strydom, M.Sc. (Agr.), Ph.D. : production problems in floriculture.   | 2, 9, 12 |
| O. J. Oleson, M.Sc. (Agr.) : vegetable breeding.  | 4, 9     |
| S. E. A. Rehm, Ph.D., Dr.Ph.Habil : physiological and biochemical problems in relation to horticultural crops.                | 3, 5, 9  |
| A. E. Greville, B.Sc. : nutrition of horticultural crops.   | 2, 9     |
| L. J. van Lelyveld, B.Sc. : nutrition of horticultural crops.   | 2, 9     |
| J. J. Wagner, B.Sc. (Agr.) : general vegetable investigations.  | 2, 9, 12 |
| P. R. Enslin, M.Sc., Ph.D. : physiological bio-chemical investigations.   | 3, 5, 9  |
| L. H. Clark, B.Sc. (Agr.), (Port Elizabeth) : pineapple investigations.   |          |
| E. M. Nyenhuis, B.Sc. (Agr.) (Potchefstroom) : general horticultural investigations.  | 9, 12    |
| A. M. du Plessis, B.Sc. (Agr.) (Oudtshoorn) : general horticultural problems.   | 9, 12    |
| R. J. Goosen, B.Sc. (Agr.) (Upington) : general horticultural field investigations.   | 9, 12    |
| E. Strydom, B.Sc. (Agr.) (Joubertina) : general horticultural investigations.   | 9, 12    |
| W. J. Carstens, B.Sc. (Agr.) (Vaalhartz) : general horticultural investigations   | 2, 9, 12 |

SEED TESTING STATION,  
Pretoria, Tel. : 2-3221

Subject

H. van Elden, *Officer in Charge* : seed testing investigations ; 1, 4, 9, 12  
cytological studies.

J. F. van Wyk, M.Sc. (Agr.) : seed production problems. 9, 12

**Western Province Fruit Research Station**

Stellenbosch. (Tel. : Nos. 323 and 113).

R. I. Nel, D.Sc. (Agr.), *Director* : codlingmoth ; biological control 1, 19  
of fruit pests.

M. W. Black, D.Sc. (Agr.) : cultural problems tree  
fruits ; delayed foliation.

A. F. de Wet, M.Sc. (Agr.) : rootstocks.

D. du Preez, M.Sc. (Agr.) : subtropical fruits.

T. Micklem, M.Sc. (Agr.) : berry fruits.

C. W. Jeffery, B.Sc. (Agr.) : delayed foliation.

S. P. Erasmus, B.Sc. (Agr.) : rootstocks.

A. J. Louw, D.Sc. (Agr.) diseases of tree fruits, es-  
pecially apple scab and peach mildew.

O. H. Jones, B.Sc. (Agr.) : diseases of berry fruits  
and grape vines.

Miss C. S. Macfarlane, M.Sc. : bacteriology of fruit  
and vegetable products ; bacterial blight of vines.

I. J. Burger, M.Sc. : problems in connection with  
fruit and vegetable preservation.

Mrs. M. M. Krynauw, B.Sc. : processing of fruit  
and vegetables.

W. F. Conradie, B.Sc. : food preservation.

Miss D. M. C. Lamprecht, B.Sc. : food dehydra-  
tion.

W. H. K. Coetzee, Ph.D. : fruit juices and utilisa-  
tion of waste products.

J. F. du T. Hugo, M.Sc. : fruit juices and utilisa-  
tion of waste products.

F. F. Pratt, B.Sc. : fruit juices and utilisation of  
products.

H. A. Schweigart, Dip.Chem., Ph.D. : general  
food technology ; biochemistry ; vitamin chem-  
istry and physiology of nutrition.

J. J. Dreyer, B.Sc. : vitamin studies.

M. S. le Roux, M.Sc. (Agr) : cultural problems of  
table grapes.

A. H. Malan, M.Sc. (Agr.) : cultural problems of  
table grapes.

W. A. K. Stubbings, D.Sc. (Agr.) : codling moth ;  
insecticides.

A. C. Myburgh, M.Sc. (Agr) : fruitfly and vince  
pests.

E. J. Smith, B.Sc. : biological control : Argentine  
ant.

Vacant : orchard mites.

Vacant : pests of berries and subtropical fruits.

} pomology.

9

} pathology.

6

} food products.

30

} viticulture.

9

} entomology.

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|  |                                    |    |
|--|------------------------------------|----|
| J. K. L. Blommaert, M.Sc. : physiology of nutrition of fruit trees ; plant hormones.                           | } physiology.                      | 3  |
| J. Reyneke, D.Sc. (Agr.) : soil utilisation.   |                                    |    |
| P. E. le R. van Niekerk, M.Sc. (Agr.) : soil moisture ; soil structure and irrigation practices.               | }                                  |    |
| E. Beyers, M.Sc. (Agr.) : biochemical studies fruit trees.   |                                    |    |
| J. J. van Deventer, B.Sc. : biochemical studies fruit trees.   |                                    |    |
| J. J. A. Bester, M.Sc. : plant nutrition.  | } chemistry.                       | 2  |
| S. Fourie, B.Sc. (Agr.) : soil fertility.  |                                    |    |
| P. G. Marais, B.Sc. : radio-active isotopes ; physical storage problems.                                       |                                    |    |
| Vacant : spectrographic methods in fruit research diagnose of minor elements deficiencies.                     | } spectrography.                   | 2  |
| P. A. L. Steyn, M.Sc. (Agr.) : breeding of deciduous fruit especially guavas, peaches grapes and strawberries. |                                    |    |
| G. D. B. de Villiers, D.Sc. : climate in relation to fruit production.   | } meteorology.                     | 26 |
| W. W. Boyes, B.Sc. (Agr.) : cold storage of fruit  |                                    |    |
| L. Ginsburg, B.Sc. : cold storage of fruit.  | } transportation and cold storage. | 30 |
| P. A. Earle, B.Sc., B.Sc. (Eng.). agricultural machinery   |                                    |    |
| S. J. Cillie, B.Sc., B.Sc. (Eng.). and processing equipment for agricultural products.                         | } engineering                      | 28 |
| G. H. Bredell, B.Sc., B.Sc. (Eng.).  |                                    |    |
| A. S. Viljoen, M.Sc. (Agr.) : cultural problems of fruit.  | } Field officers.                  | 9  |
| P. J. J. Prins, B.Sc. (Agr.) : cultural problems of fruit.   |                                    |    |
| W. F. Conradie, B.Sc. (Agr.) : cultural problems of fruit.   |                                    |    |

## Division of Entomology

|  |    |
|--|----|
| T. J. Naudé, M.Sc., Ph.D., <i>Chief of Division and Director of Research, Cicadellidae</i> (Tel. 2.6605 Pretoria).   | 19 |
| H. K. Munro, D.Sc., F.R.E.S. (Lond.) : systematic entomology (Trypetidae ; insect collections and records (Tel.) : 2.6705 Pretoria.)   | 19 |
| F. G. C. Tooke, M.Sc. : forest insect research (Tel. 2.6805 Pretoria)  | 19 |
| F. Taylor, B.A. : cutworm and maize stalk-borer investigations.  | 19 |
| C. P. van der Merwe : plant regulatory services (Tel. 2.7005 Pretoria).  | 19 |
| W. J. van der Line, M.Sc., Ph.D. : plant nematodes (Tel. 2.6705 Pretoria).   | 21 |
| W. G. H. Coaton, D.Sc. : termite investigations. (Tel. 2.6805 Pretoria).   | 19 |
| F. W. Pettay, Ph.D. : biological control of cactus insects.  | 19 |
| J. S. Taylor, M.A., D.I.C., F.R.E.S. : biological control of cactus insects.   | 19 |
| R. O. Wahl, M.A., B.A. (Hons.) : deciduous fruit pest research : dried fruit pests and cold storage in relation to fruit fly ; <i>hylo-truypes bajulus</i> investigations. (Tel. : 6.2661 Cape Town) | 19 |



|   | Subject |
|---|---------|
| G. A. Hepburn, B.Sc. : citrus pests and hylotrupes bajulus investigations. (Tel. : 2.734 Port Elizabeth).                   | 19      |
| B. Smit, D.Sc. : household insect problems (Tel. 2.6705 Pretoria)   | 19      |
| B. K. Petty, M.Sc. : insecticides research (Tel. : 3.3116 Pretoria)   | 19      |
| F. J. Stofberg, B.Sc. : citrus pest investigations.   | 19      |
| A. J. Smith, B.Sc. : citrus, cotton and tobacco insects.  | 19      |
| E. E. Anderssen, B.Sc. (Agr.) : insect vectors of tobacco diseases ; vegetable pest investigations. (Tel. 2.6705 Pretoria)  | 19      |
| A. E. Lundie, B.Sc. (Agr.), Ph.D. : apiculture. (Tel. : 2.6909 Pretoria).   | 19      |
| Prof. J. C. Faure, Ph.D. : bionomics and control of migratory locusts ; taxonomy of Thysanoptera. (Tel. : 4.3812 Pretoria). | 19      |
| C. du Plessis, B.Sc., Locust Information Bureau : attractants and repellents in locust baits. (Tel. 4.3912 Pretoria.)       | 19      |
| S. J. S. Marais, B.Sc. : biological control of Karoor caterpillar.  | 19      |
| D. H. Botha, B.Sc. : locust destruction.  | 19      |
| C. J. B. Smit, M.Sc. : life history and ecology of brown locust in outbreak centres. (Tel. 4.3912 Pretoria.)                | 19      |
| H. A. F. Lea, B.Sc. : bionomics and control of migratory locusts. (Tel. : 4.3912 Pretoria).                                 | 19      |
| A. L. Reyneke, B.A. : life history and control of brown locust in outbreak centres.   | 19      |
| D. van V. Webb, B.Sc. : wattle bagworm research. (Tel. 3281 Pieter-Maritzburg.)   | 19      |
| Miss H. A. D. van Schalkwyk, M.Sc. : insect identification ; records and curculionidae (systematic) (Tel. 2.6805 Pretoria). | 19      |
| H. J. R. Dürr, M.Sc. : chemistry—insecticide research. (Tel. 6.2661 Cape Town).   | 19      |
| Miss V. Angelopulo, M.Sc. : Plant Nematode Research. (Tel. : 2.6705 Pretoria).  | 21      |
| J. H. Grobler, B.Sc. : pine browntail moth investigation. (Tel. : 2.6805. Pretoria).  | 19      |
| E. Hartwig, M.Sc., Thysanoptero and Coccidae (systematic) ; insect identification. (Tel. 2.6705) Pretoria).                 | 19      |
| E. H. W. Lochner, B.Sc. : Insecticide Research. (Tel. 3.3116 Pretoria).   | 19      |
| Miss A. J. Dunton, B.Sc. : wattle bagworm (insecticides) (Tel. 3281 Pieter-Maritzburg).                                     | 19      |

## Division of Economics and Markets

(Tel. : 2.2401)

|  |    |
|--|----|
| S. J. de Swardt, B.A., M.Sc., <i>Chief of Division</i> : direction and co-ordination of economic research.                 | 27 |
| A. J. Beyleveld, B.Com., Ph.D., <i>Principal Economist</i> : international trade ; statistical and marketing intelligence. | 29 |
| A. R. Havemann, B.Sc. (Agr.), M.Sc., <i>Senior Economist</i> : farm costing and farm management.                           | 27 |
| J. C. Neethling, B.A., Ph.D., <i>Senior Economist</i> : farm costing ; farm management ; agro-economic survey.             | 27 |
| A. J. du Plessis, M.Sc. (Agr.) : price statistics ; national income.   | 29 |

## UNION OF SOUTH AFRICA

Subject

|  |    |
|--|----|
| B. J. van Niekerk, M.A. : economic and marketing intelligence.   | 27 |
| J. H. du Plessis, B.A., M.Sc. : marketing of tobacco, chicory ; oil seeds ; hay.                                 | 27 |
| O. E. Burger, B.A., B.Com., M.Sc. : farm accounting ; farm costing.  | 27 |
| A. B. C. Nel, B.Sc. (Agr.) : farm management.  | 27 |
| S. H. Fischer, B.Sc. (Agr.) : marketing intelligence.  | 27 |
| J. le R. Retief, B.Sc. (Agr.) : agro-economic survey farm management.  | 27 |
| J. H. L. Jooste, B.Sc. (Agric.) : agro-economic survey ; farm management.  | 27 |
| D. F. Marais, B.Com. : price statistics.   | 29 |
| M. D. Marais, B.A., M.A., B.Econ., B.Com., Ph.D. : international trade ; statistical and marketing intelligence. | 29 |
| B. S. Olivier, B.Com. : price statistics.  | 29 |
| J. K. Siertsema, B.Com. : farm accounting ; farm costing.  | 27 |
| A. J. P. van Zyl, B.Econ. : consumption ; farm costing.  | 27 |
| C. M. van Niekerk, B.Com. (Hon.) : marketing intelligence.   | 27 |
| S. F. Papenfus, B.A. (Econ.) : statistics general.   | 29 |
| J. B. Willers, B.Com. (Econ.) : farm management.   | 27 |
| S. J. van N. du Toit, B.Com. (Econ.) : farm management.  | 27 |
| C. P. de Klerk, B.Com. (Econ.) : farm management.  | 27 |
| D. J. G. Smith, B.Sc. (Agr.) : farm management.  | 27 |
| S. F. Oberholzer, B.Sc. (Agr.) : farm management.  | 27 |
| I. D. van der Walt, B.Sc. (Agr.) : farm management.  | 27 |

## Division of Botany and Plant Pathology

|  |       |
|--|-------|
| R. A. Dyer, M.Sc., D.Sc., F.R.S.S.A., <i>Chief of Division, Director of Botanical Survey</i> : botanical survey ; systematic botany. | 1     |
| J. E. van der Plank, M.Sc., Ph.D., D.Sc., <i>Officer in Charge of Plant Pathology Section</i> : virus and other plant diseases.      | 6     |
| Miss I. C. Verdoorn : systematic botany.   | 3     |
| Miss E. A. Bruce, B.Sc. : systematic botany.   | 3     |
| B. de Winter, M.Sc. : systematic botany.   | 3     |
| Miss J. Elffers, B.Sc. : systematic botany.  | 3     |
| Miss C. P. Edmonstone-Sammons, B.Sc. (Hon.) : systematic botany.   | 3     |
| Miss M. Henrici, Ph.D., D.Sc. : plant physiology and bio-chemistry.  | 3, 24 |
| L. E. W. Codd, M.Sc., D.Sc. : botanical survey.  | 3     |
| J. P. H. Acocks, B.A., M.Sc. : botanical survey.   | 3     |
| R. Story, M.Sc. : botanical survey.  | 3     |
| A. P. D. McClean, M.Sc., D.Sc. : virus diseases.   | 6     |
| V. A. Wager, M.Sc., D.Sc. : plant diseases.  | 6     |
| F. C. Loest, M.Sc., D.Sc. : sub-tropical plant diseases.   | 6     |
| E. E. Schaefer, M.Sc. : plant diseases advisory service.   | 6     |
| P. H. B. Talbot, M.Sc., Ph.D., : mycology.   | 6, 20 |
| G. J. Gorter, M.Sc. : cereal diseases.   | 6     |
| Miss C. F. O'Connor, B.Sc. : potato virus diseases.  | 6     |
| G. F. Cross, B.Sc. : subtropical plant diseases.   | 6     |
| Miss P. J. Klessner, B.Sc. : plant virus diseases.   | 6     |
| Miss S. M. Cowin, B.Sc. (Hon.) : plant virus diseases.   |       |
| Miss C. H. van der Merwe, B.Sc. (Agr.) : plant diseases.   |       |

**Division of Agricultural Education and Research**

|  |            |
|--|------------|
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| G. S. Mare, B.Sc. (Agr.), <i>Asst. Director of Agricultural Education and Research.</i>                        | 1          |
| P. Koch, B.Sc. (Agr.) : fibre plants.  | 7          |
| J. W. Rowland, D.Sc. (Agr.), <i>Principal Pasture Research Officer :</i><br>research in pastures and land use. | 8          |
| F. W. Nesor, B.Sc. : statistical work on agricultural problems.  | 29         |
| J. C. Bonsma, M.Sc. (Agr.) : climatological studies on cattle ; beef<br>cattle breeding.                       | 14, 15, 26 |
| L. C. C. Liebenberg, M.Sc. (Agr.) : grass seed production and re-<br>search.                                   | 3, 8       |
| A. Fisher, M.Sc. (S.A.) : pasture research and land use.   | 8          |
| C. D. B. Liebenberg, B.Sc. : pasture research and land use.  | 3, 8       |
| Miss J. Whitmore, M.A. (S.A.) : climatological studies.  | 26         |
| C. J. Pienaar, M.Sc. (S.A.) : pasture research and land use.   | 8          |
| J. J. J. Kotze, M.Sc. (Agr.) : general animal husbandry.   | 14, 17, 18 |
| P. J. Schreuder, B.A., Ph.D. : horsebreeding and management.   | 18         |
| E. J. Penzhorn, B.Sc. (Agr.) : dairy cattle ; production under<br>irrigation.                                  | 17, 18     |
| J. D. le Roux, B.Sc. (Agr.) : climatological studies ; beef cattle.  | 14, 26     |
| D. F. Retief, B.Sc. : tobacco research.  | 4, 7       |
| W. v. d. Merwe, B.Sc. (Agr.) : potato production under irrigation.   | 4, 7       |
| C. F. van Rooyen, M.Sc. : tobacco research.  | 4, 7       |
| J. F. Peens, M.Sc. : irrigated crops and tobacco.  | 4, 7       |
| I. J. Nothling, B.Sc. (Agr.) : crops under irrigation.   | 7          |
| A. B. Bridgens, B.Sc. : pasture research and land use.   | 8          |
| D. G. Collett, B.Sc. : pasture research and land use.  | 3, 8       |
| J. S. J. du Toit, B.Sc. (Agr.) : field husbandry and irrigated crops.  | 7          |
| T. F. Gericke, B.Sc. (Agr.) : pasture research and land use.   | 3, 8       |
| W. S. Grobbelaar, B.Sc. (Agr.), Field husbandry.   | 7          |
| S. V. Hefer, B.Sc., M.Sc. : chemistry of weedicides.   | 5, 25      |
| A. Jurriaanse, B.Sc. (Agric.), B.Sc. (Forestry) : fodder trees.  | 8          |
| Miss H. M. le Roux, B.Sc. (Hons.), M.Sc. : plant physiology.   | 6          |
| J. S. C. Marais, D.Sc. : biochemistry.   | 25         |
| A. R. Pullen, B.Sc. (Agr.), M.Sc. (Agr.) : fibre crops.  | 4          |
| H. J. Straatman, Landbou Ingenieur (Wageningen) : field husbandry.   | 7          |
| H. H. von Broembsen, B.Sc. (Agr.) : pasture research and land use.   | 3, 8       |

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| A. J. Taylor, M.Sc., A.R.I.C. : soil fertility.     | 2    |
| W. O. Schultz, B.Sc. (Agr.) Diploma Landwirtschaft. | 7    |
| G. F. S. Hyam, B.Sc. : field husbandry.             | 7    |
| P. F. Clarke, M.Sc., : field husbandry.             | 7, 8 |
| A. J. Pienaar, B.Sc. : pasture research.            | 8    |
| T. S. Jenkinson, B.Sc. : pasture research.          | 8    |



# UNION OF SOUTH AFRICA

|   | Subject |
|---|---------|
| E. K. Hall, M.Sc. : animal husbandry and dairying.  | 17      |
| D. P. Hanham, B.Sc. : animal husbandry and dairying.  | 17      |
| M. A. A. Vonk, Agr. Eng. L.E. : dairying  | 17      |
| P. D. Rose, Certificate Grootfontein, Sheep and Wool, Certificate<br>Bradford Tch. College. (Sheep and Wool) F.T.I. | 18      |
| J. C. D. Retief, B.Sc. : poultry.   | 17      |
| L. B. Ripley, Ph.D., M.Sc. : entomology.  | 19      |
| C. T. Crosby, B.Sc. (Agr.) (Eng.) : agric. engineering.   | 28      |
| Miss M. W. Farmar, B.Sc. : soil fertility.  | 2       |

## GROOTFONTEIN COLLEGE OF AGRICULTURE

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| P. J. Naude, B.Sc. (Agr.), M.Sc. (Agr.), M.A.                              | 4, 7, 8, 12    |
| J. H. Vorster, B.Sc. (Agr.).   | 7, 8, 12       |
| D. F. Badenhorst, B.Sc. (Agr.).  | 14             |
| J. J. S. Cilliers, B.Sc. (Agr.).   | 2, 7           |
| J. H. Stapelberg, B.Sc. (Agr.).  | 14, 15, 17, 18 |
| P. L. Crouse, B.Sc. (Agr.).  | 17             |
| H. A. J. Stead, B.Sc.  | 2, 5, 24       |
| G. C. Theron, M.Sc., Ph.D.   | 3              |
| M. M. Walters, B.Sc. (Agr.),   | 2, 5, 24       |
| J. H. Grobler, B.Sc.   | 2, 5, 24       |
| A. H. de Vries, B.Sc. (Agr.).  | 19             |
| C. R. Wyche, Hons. Diploma in Sheep and Wool.                              | 18             |

### B. OFFICERS ON AGRICULTURAL EDUCATION AND RESEARCH ESTABLISHMENT

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| C. M. Havenga, B.Com.                                | 29       |
| W. J. Hugo, B.Sc. (Agr.)                             | 15       |
| W. D. Meyer, B.Sc. (Agr.),                           | 14       |
| J. C. Erasmus, M.Sc. (Agr.).                         | 4, 7, 8  |
| C. E. M. Tidmarsh, M.Sc., Ph.D.                      | 3, 8, 12 |
| C. J. van Heerden, B.Sc. (Soil Conservation).        | 3, 8, 12 |
| P. W. Roux, B.Sc.                                    | 3, 8, 12 |
| P. E. F. Jooste, Two Year Diploma Course.            | 18       |

## GLEN COLLEGE OF AGRICULTURE

Glen, Orange Free State.

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| I. P. J. du Plessis, B.A., M.Sc., <i>Principal.</i>   | 1      |
| M. J. van der Spuy, B.Sc. (Agr.), Ph.D., <i>Senior Education Officer<br/>and Lecturer in Chemistry.</i> | 2, 5   |
| F. M. du Toit, M.Sc. (Agr.) : field husbandry.  | 4, 7   |
| H. W. F. G. Kloos, D.Sc. : field husbandry.   | 4, 7   |
| E. E. Meyer, B.Sc. (Agr.) : animal husbandry.   | 14, 15 |
| J. J. Pretorius, B.Sc. (Agr.) : animal husbandry.   | 14, 15 |
| W. C. J. Viljoen, B.Sc. (Agr.) : poultry.   | 18     |

|   |               |
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| J. A. de Beer, B.Sc. (Agric.), <i>Test Manager</i> : poultry. | Subject<br>18 |
| J. C. de Klerk, B.Sc. (Agr.) : sheep and wool.                | 18            |
| M. C. F. du Plessis, B.Sc. : chemistry.                       | 2, 5          |
| J. W. C. Mostert, M.Sc. : botany.                             | 3, 8          |

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Potchefstroom.

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| H. J. Ligthelm, B.Sc. (Agr.) : general dairying.  | 17      |
| G. A. Gill, M.C., B.A. (Cape), M.A. (Cantab.) : botany.   | 3       |
| F. X. Laubscher, M.Sc. (Agr.) : maize.  | 2, 4, 7 |
| J. P. F. Sellschop, M.A., M.Sc. (Agr.) : oil-bearing seeds ; ground-nuts.                                     | 4, 7    |
| D. W. McKellar, B.Sc. (Agr.) : arable crops.  | 7       |
| H. J. Maree, M.Sc. (Stell.), M.Sc. (Wisc.) : lucerne.   | 4       |
| P. J. Gildenhuys, M.Sc. : grasses.  | 4, 8    |
| M. D. Pienaar, M.Sc. (Agr.) : soybeans ; cowpeas.   | 4       |
| I. D. Hattingh, M.Sc. : plant physiology.   | 3       |
| Miss M. L. Coetsee, B.Sc. (Hon.) : cytology grasses.  | 4       |
| Miss A. S. van Wyk, B.Sc. : general botany.   | 3       |
| J. G. Brevis, B.Sc. : soils, plant and animal nutrition.  | 2, 15   |
| J. D. Basson, M.Sc. : soils ; plant and animal nutrition.   | 2, 15   |
| P. J. Serfontein, B.S.A. (Toronto), M.Sc. (Kansas) : poultry nutrition and breeding.                          | 14, 15  |
| C. L. Marais, B.Sc. (Agr) : poultry nutrition and breeding.   | 14, 15  |
| S. T. Potgieter, B.Sc. (Agr.) : poultry nutrition and breeding.   | 14, 15  |
| E. M. Nyenhuis, B.Sc. (Agr.) : horticulture.  | 9       |
| J. H. Preller, M.Sc. (Agr.) : pastures.   | 8       |
| P. J. S. Coetzee, M.Sc. : pastures.   | 8       |
| C. T. van Rensburg, Dip. S. and W. (Grootfontein), Hon. Dip S. and W. (Syd.) : sheep breeding and production. | 14, 17  |
| H. P. D. van Wyk, B.Sc. (Agr.) : cattle breeding and nutrition.   | 14, 15  |
| W. A. Verbeek, M.Sc. (Agr) : animal breeding and nutrition (dairy breeds, pigs).                              | 14, 15  |
| S. A. Oosthuizen, M.Sc. (Agr) : animal breeding and nutrition (cattle, horses, donkeys).                      | 14, 15  |
| K. D. W. Lüdemann, B.Sc. (Agr.) : animal breeding and nutrition (beef breeds).                                | 14, 15  |
| J. G. Marais, B.Sc. (Agr.) : arable crops.  | 7       |

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| I. de V. Malherbe, B.A., Ph.D.   |   |
| M. H. Slabber, M.Sc., D.Sc. (Agr.).  |   |
| A. M. C. Skibbe, M.A.  |   |
| L. L. Eksteen, M.Sc. (Agr.).   |   |
| J. H. T. Nieuwoudt, B.Sc. (Agr.).  |   |

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| A. C. Leemann, D.Sc. (Geneva).           | : plant physiology.  | 3      |
| J. H. Neethling                          | } plant breeding.  | 4      |
| A. W. van der Westhuizen.                |  |        |
| J. M. Stevens.                           |  |        |
| S. J. du Plessis, D.Sc. (Agr.).          | } plant pathology.   | 6      |
| J. J. du Toit, M.Sc. (Agr.).             |  |        |
| J. H. Nortje, B.Sc. (Agr.)               |  |        |
| J. T. R. Sim, D.Sc. (Agr.).              | } arable crops, grassland, <sup>herbage</sup> and fodder plants. | 7, 8   |
| P. D. Henning, D.Sc. (Agr.).             |  |        |
| J. H. Hofmeyr, D.Sc. (Agr.).             |  |        |
| S. A. Hulme, B.Sc. (Agr.).               |  |        |
| S. J. Gericke, B.Sc. (Agr.).             | } horticulture—pomology  | 9      |
| O. S. H. Reinecke.                       |  |        |
| P. Rocher, B.Sc. (Agr.).                 | } horticulture—olericulture.                                     |        |
| H. L. Strydom, M.Sc. (Agr.)              | : plant husbandry (tobacco).                                     | 12     |
| C. J. Theron, M.Sc. (Agr.).              | } plant husbandry, viticulture and oenology.                     | 12     |
| J. H. Cronje, Ph.D.                      |  |        |
| C. T. de Waal, M.Sc. (Agr.).             |  |        |
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| B. J. Venter, B.Sc. (Agr.).              |  |        |
| C. J. Orffer, B.Sc. (Agr.).              |  |        |
| J. J. van Huyssteen.                     |  |        |
| O.T. de Villiers, M.R.C.V.S., D.V.Sc.:   | animal anatomy and physiology.                                   | 13     |
| J. C. Swart, D.Sc. (Agr.).               | } animal breeding and nutrition.                                 | 14, 15 |
| J. H. W. Th. Reimers, Agr. Ir.           |  |        |
| G. W. Johnston.                          |  |        |
| P. J. J. van Rensburg, B.Sc. (Agr.).     |  |        |
| B. J. van der Vyver, B.Sc. (Agr.).       |  |        |
| I. L. Ferreira, B.Sc. (Agr.).            | } animal production (poultry).                                   | 17     |
| C. R. Liebenberg, M.Sc. (Agr.).          |  |        |
| W. R. van Schalkwyk, B.Sc. (Agr.).       |  |        |
| J. E. Erasmus, B.Sc. (Agr.).             | } animal production (dairying).                                  | 17     |
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| C. P. Greyling, B.Sc. (Agr.).            |  |        |
| J. T. Potgieter, M.Sc., Ph.D. (Ohio).    | } entomology.  | 19     |
| C. J. Joubert, M.Sc. (Agr.)              |  |        |
| J. G. Theron, B.Sc.                      |  |        |
| I. S. Perold, D.Sc. (Agr.):              | bio-chemistry.   | 25     |
| W. H. van der Merwe, B.Sc. (Agr.), Ph.D. | } economics.   | 27     |
| S. P. van Wyk, Ph.D.                     |  |        |
| R. P. Perold, B.Sc.:                     | engineering.   | 28     |
| Miss M. E. Jooste, M.Sc.                 | } home economics.  | 27     |
| Miss G. J. Louw, B.Sc.                   |  |        |
| Miss A. C. Vos, B.Sc.                    |  |        |

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| J. J. Kotze, B.A., B.Sc. (Edin.), <i>Asst. Director of Forestry.</i> | 1 |



**Silviculture**

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| E. E. M. Looock, B.Sc. (For.) : silviculture and systematic botany. | 10 |
| H. A. Luckhoff, M.Sc. (For.) : silviculture.                        | 10 |
| H. B. Rycroft, M.Sc. : forest influences.                           | 10 |
| A. M. de Villiers, B.Sc. (For.) : forest influences.                | 10 |

**Forest Products**

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| J. P. Rault, B.Sc. (For.) : seasoning, etc.                              | 11 |
| C. H. Banks, B.Sc. (For.) : timber mechanics.                            | 11 |
| P. M. D. Krogh, <i>Senior Technical Assistant</i> : timber preservation. | 11 |

**AGRICULTURAL RESEARCH INSTITUTE**

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| H. B. Davel, B.Sc. (Ames) : composition of milk-manufacture and processing of dairy products.  | 17   |
| H. L. Neethling, M.Sc. (Agr.) (Ames.) : bacterial contamination of butter from wash water ; bacterial contamination of cheese.   | 17, 22   |
| A. A. de Kock, B.Sc. (Agr.) (Pret.) : general dairy bacteriological studies.   | 22   |
| S. Bakalor, M.Sc. (Agr.) (Pret.) : composition of milk supplies of South African dairy industry ; influence of climatic factors on composition of milk ; cheese yields in the Union. | 25   |
| A. Dixon, M.Sc. (Agr.) (Pret.) : freezing-point depression of milk ; adulteration of industrial milk supplies.   | 25   |
| F. N. Bonsma, B.Sc. (Agr.) (S.A.), D.Sc. (Agr.) (Pret.) : animal breeding research with dairy cattle, sheep and pigs ; animal nutrition.   | 14, 15, 17   |
| J. S. Starke, M.Sc. (Agr.) (Pret.) : animal breeding research with dairy cattle, sheep and pigs ; animal nutrition.  | 14, 15, 17   |
| J. C. Faure, Ph.D. (Cornell) taxonomy of Thysanoptera : general entomology.  | 19   |
| J. W. C. Geyer, M.Sc. (Agr.) (Pret.) : general entomology ; termite anatomy, morphology and histology.   | 19   |
| J. J. Matthee, M.Sc. (Pret.), Ph.D. (Cantab.) : insect physiology.   | 19   |
| M. W. Henning, M.R.C.V.S., D.Sc. (S.A.) : salmonella infections and calf paratyphoid, equine abortion studies in bacteriophage and ovine abortion.                                   | 22   |
| F. R. Tomlinson, M.Sc. (Agr.) (Stell), Ph.D. (Cornell), D.Sc. (Agr.) (Pret.) : price analysis ; land values ; farm organization studies, research methods in farm economic research. | 27   |
| Z. D. v. d. Merwe, B.Sc. (Agr.) (Pret.) : marketing fruits and vegetables.   | 27   |
| J. J. Theron, B.Sc. (Agr.) (S.A.),<br>Ph.D. (Calif.)   | } soil fertility studies and<br>nitrogen in soils ; fertiliser<br>trials on dryland and under<br>irrigation ; phosphate de-<br>ficiency in relation to climatic<br>conditions. |
| L. P. v. Wyk, B.Sc. (Agr.) (Pret.)   |  |
| V. de Villiers, B.Sc. (Agr.) (Pret.)   |  |
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| A. J. v. Tonder, B.A. (Cape), M.Sc. (Calif.), A.C.G.I. : standardization of ploughs.   | 28       |
| J. A. Vorster, B.Sc. (Agr.) (Pret.), M.S.A.E. (Ames) : rainfall and run-off, design of tillage cutting shares. Bulk handling of maize. | 28, 30   |
| S. J. P. K. v. Heerden, M.Sc. (Agr.). (Eng). (Pret.) : maize harvesting studies and picker designs.                                    | 28       |
| J. H. Kellermann, M.Sc. (Agr.) (Stell), Ph.D. (Wiscon.), D.Sc. (Agr.) (Stell.) : biochemical and nutritional studies.                  | 25       |
| D. J. J. Potgieter, B.Sc., M.Sc. (Agr.). (Pret.) : biochemical and nutritional studies.  | 25       |
| D. G. Haylett, M.Sc. (Illinois), Ph.D. (Cornell).  | 2, 7, 12 |
| W. B. du Preez, M.Sc. (Agr.) (Pret.).  |          |
| W. J. Marais, B.Sc. (Agr.) (Pret.).  |          |
| A. M. Gericke, M.Sc. (Rutgers), D.Sc. (Agr.) (Pret.).  | 18       |
| H. L. Delport, B.Sc. (Agr.) (Pret.).   | 18       |
| B. J. Dippenaar, M.Sc. (Agr.), D.Sc. (Agr.) (Stell.) : physiogenic disease of plants and vegetable pathology.                          |          |
| E. E. Wyers, B.A. (S.A.), M.Sc. (Pret.) : mycological studies of economic plants.  | 6        |
| P. C. J. Oberholzer, M.Sc. (Agr.) (Pret.), Ph.D. (Ariz.).  | 9        |
| I. Mathews, M.Sc. (Agr.) (Pret.).  | 9        |
| D. F. A. von Staden, B.Sc. (Agr.) (Pret.).   | 9        |
| S. F. Stiemie, B.Sc. (Agr.) (Pret.).   | 9        |
| J. D. J. Hofmeyr, M.Sc. (Agr.) (Stell), Ph.D. (Cornell), D.Ph. (S.A.): genetics and plant breeding of field and horticultural crops.   | 4        |
| J. P. Botha, M.Sc. (Agr.) (Pret.) : grazing management ; farm units.   | 8        |

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| G. B. Laurence, B.Sc. (Agr.) ( <i>Cum laude</i> ), Ph.D.       | 14, 15, 17, 18 |
| J. C. le Roux, B.Sc. (Agr.), M.Sc.                             | 9              |
| E. R. Orchard, B.Sc. (Agr.), Ph.D., A.R.I.C., S.A.C.I., M.B.E. | 2, 24          |
| A. A. Rayner, B.A., M.A., Ph.D.                                | 29             |
| J. D. Scott, B.Sc., M.Sc., D.Sc.                               | 3, 8, 12       |
| C. W. Abbott, B.Sc. (Agr.), M.Sc., Ph.D.                       | 17             |
| G. P. Bishop, B.V.Sc.  | 13, 16         |
| P. E. de Waal, B.Sc. (Agr.), M.Sc. (Agr.).                     | 27             |
| P. L. Kotze, B.Sc. (Agr.), M.Sc. (Agr.).                       | 14, 15, 17, 18 |
| M. J. Oosthuizen, B.Sc. (Agr.), M.Sc., Ph.D.                   | 19             |
| I. J. J. Smuts, B.Sc. (Agr.).                                  | 7, 8, 12       |
| H. I. Behrmann, B.Sc. (Agr.), M.Sc. (Agr.)                     | 27             |
| J. W. Claassens, B.Sc. (Agr.)                                  | 17             |

## UNION OF SOUTH AFRICA

|  | Subject            |
|--|--------------------|
| P. H. C. du Plessis, B.Sc. (Agr.).                                     | 13, 14, 15, 17, 18 |
| W. J. Fölscher, B.Sc. (Agr.) ( <i>Cum Laude</i> ), M.Sc. (Agr.).       | 2, 24              |
| R. Gaigher, B.Sc. (Agr.) (Eng.), B.Sc. Civ. Eng., M.Sc. (Agr.) (Eng.). | 28                 |
| K. Nathanson, B.Sc. (Agr.), H.E.D.                                     | 7, 8, 12           |
| O. J. Olivier, B.Sc. (Agr.).   | 9                  |
| Miss S. J. Truter, B.Sc., M.Sc. ( <i>Cum laude</i> ), D.Sc.            | 6, 20, 22          |
| W. H. Weyers, B.Sc. (Agr.), M.Sc. (Agr.).                              | 4                  |
| Miss M. H. Roberts, B.Sc.  | 26                 |

## UNION DEPARTMENT OF NATIVE AFFAIRS

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| D. J. van den Berg, M.Sc., <i>Director of Native Agriculture</i> : agro-<br>nomy and genetics.  | 1      |
| H. H. Curson, Dr. Med. Vet., F.R.C.V., <i>Deputy Director of Native<br/>Agriculture</i> : animal husbandry.   | 18     |
| H. A. Melle, B.A. (Agr.) (Oxon), N.D.A., Dip. Agr. (Oxon.), <i>Chief<br/>Agricultural Officer, Western Areas</i> : ranch management ; plants<br>of economical importance. | 12 18  |
| W. R. Norton, <i>Chief Agricultural Officer, Natal</i> : animal husbandry.  | 18     |
| A. R. H. Welsh, <i>Chief Agricultural Officer, Transkei</i> : animal<br>husbandry.  | 18     |
| R. R. Baker, <i>Chief Agricultural Officer, Ciskei</i> : animal husbandry.  | 18     |
| J. R. A. Matheson, <i>Deputy Chief Agricultural Officer, Natal</i> : arable<br>crops.   | 7      |
| R. A. Bennie, <i>Principal, Native School of Agriculture, Tsolo Tran-<br/>skei</i> : arable crops.  | 7      |
| N. F. Fourie, B.Sc. (Agric.), <i>Principal, Native School of Agricul-<br/>ture, Fort Cox, Ciskei</i> : animal and field husbandry.  | 12, 18 |



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| S. Dyal Singh Johar, B.Sc. (Hons.), M.Sc., <i>Microbiologist</i> : plant pathology and microbiology (fruit and veg. products).                                    | 6, 22  |
| Ram Chand Bhutiani, B.Sc. (Hons.), M.Sc. (Agr.), A.A.C.I. (Australia), <i>Assistant Advisory Officer</i> : biochemistry ; food technology and fruit preservation. | 25, 30 |
| Nagina Lal Jain, M.Sc. (Tech.), <i>Assistant Biochemist</i> , : technical chemistry ; fruit preservation.   | 24, 30 |
| Baldev Singh Bhatia, B.Sc. (Agr.), <i>Senior Research Assistant</i> : fruit preservation.   | 30     |
| Devinder Pal Das, B.Sc., Dip. I.I.F.T., <i>Research Assistant</i> : fruit preservation.   | 30     |

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| Jagdish Chander Anand, B.Sc., Dip. I.I.F.T., <i>Research Assistant</i> : fruit preservation. | Subject<br>30 |
| Mohan Singh, B.Sc. (Agr.), <i>Research Assistant</i> : horticulture and fruit preservation.  | 9, 30         |

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| Ram Sarup Virmani, B.Sc. (Hons.), M.Sc. (Tech.), <i>Demonstrator</i> : diploma course in fruit preservation.                               | 17 |
| Jiwan Singh Pruthi, B.Sc. (Agr.), <i>Demonstrator</i> : diploma course in fruit preservation.  | 17 |

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| J. S. Raj, M.Sc. (Econ.) (Lond.), <i>Deputy Economic and Statistical Adviser to the Government of India</i> . (Tel. : 42729) : organizing collection and interpretation of economic and statistical data relating to agricultural problems and assisting the Economic and Statistical Adviser in his advisory functions.   | 27, 29 |
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*and Director Locust Control in India.* (Tel. : 43824).

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*(quarantines).* (Tel. : 42391/65).

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**DIVISION OF BOTANY**

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| Dr. G. S. Murty, M.Sc., Associate I.A.R.I., Ph.D., <i>Assistant<br/>Botanist : breeding and genetics of maize and wheat.</i>  | 4    |
| M. D. Nandkeolyar, M.Sc., <i>Superintendent, Botanical Sub-Station,<br/>Pusa, Bihar : breeding of wheat.</i>  | 4    |

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| B. L. Chona, Ph.D., D.I.C., <i>Assistant Systematic Mycologist : diseases of sugarcane and taxonomy of fungi.</i>  | 6, 20 |
| S. P. Ray Chaudhuri, M.Sc., D.Phil., F.L.S., <i>Associate I.A.R.I., Assistant Virologist : plant viruses in general.</i>   | 22    |
| R. Prasada, M.Sc., D.Sc., <i>Assistant Plant Pathologist : study of wheat rusts.</i>   | 6     |
| M. L. Gattani, M.Sc., Ph.D., <i>Assistant Plant Pathologist : fungicides ; cereal smuts.</i>   | 6     |
| M. K. Hingorani, Ph.D., <i>Associate I.A.R.I., Assistant Plant Bacteriologist : bacterial disease of wheat and storage rots of fruits.</i>                           | 22    |

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| R. V. Ramiah, B.E. (Mech.), M.Sc. (AE), M.A.S.A.E., <i>Agricultural Engineer, Design and Development of Agricultural Machines.</i>   |    |
| A. K. Kaul, <i>Assistant Engineer : testing of agricultural implements.</i>  | 18 |
| K. S. Chopra, A.M.M.E.A., <i>Assistant Engineer, Field Trials of Agricultural Implements and Tractors.</i>   |    |

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| Dr. S. Pradhan, M.Sc., Ph.D., D.Sc., F.R.E.S., <i>Insect Ecologist : ecology and toxicology.</i>  | 10 |
| B. B. Bose, B.Sc., <i>Assistant Systematic Entomologist : taxonomy of lepidoptera.</i>  | 10 |

|   |               |
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| C. K. Samuel, B.Sc., Associate I.A.R.I., <i>Assistant Systematic Entomologist</i> : biology and survey of crop pests.                                       | Subject<br>19 |
| Dr. R. P. Chaudhury, M.Sc., Ph.D., F.R.E.S., <i>Assistant Insect Epidemiologist</i> : epidemiology population studies and insect vectors of virus diseases. | 19            |
| Rattan Lal, M.Sc. (Hons.), Associate I.A.R.I., <i>Assistant Insect Physiologist</i> : insect physiology and taxonomy of diptera.                            | 19            |
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|  |       |
|--|-------|
| Dr. S. P. Ray Chaudhuri, M.Sc., Ph.D., D.Sc., F.R.I.C., <i>Head of the Division of Soil Science and Agricultural Chemistry</i> .                                 | 1, 24 |
| Dr. S. V. Desai, B.Sc., Ph.D., D.Sc., D.I.C., <i>Soil Microbiologist</i> .   | 24    |
| Dr. N. B. Das, Ph.D., <i>Biochemist</i> : biochemical problems, including nutrition.   | 25    |
| Dr. K. C. Gulati, M.Sc. (Hon.), B.Sc. (Hons. Tech.), Ph.D., <i>Organic Chemist</i> : insecticides and fungicides (synthetic and from plant origin, oils, fats.). | 8     |
| Dr. C. Dakshinamurty, M.Sc., Ph.D., D.Sc., F. Institute P. (Lond.), <i>Experimental Physicist</i> : spectrographic analysis of soils and plants.                 | 2     |
| Dr. B. C. Chatterjee, D.Sc., <i>Physical Chemist</i> : genesis and development of Indian soils.  | 2     |
| Dr. R. V. Tamhane, M.Agr., Ph.D., <i>Soil Survey Officer</i> : soil survey.  | 2     |
| M. A. Idnani, B.Sc., Associate I.A.R.I., <i>Assistant Agricultural Chemist</i> : conservation and utilization of human urine as manure.                          | 2     |
| L. M. Mathur, M.A., B.T., A.S.T., <i>Officiating Assistant Soil Survey Officer</i> : soil survey and land utilization.   | 2     |
| Dr. K. V. S. Satyanarayana, B.Sc. (Agr.), Ph.D., Associate I.A.R.I., <i>Assistant Soil Survey Officer</i> .  | 2     |
| Dr. B. B. Roy, M.Sc., Ph.D., A.R.I.C., <i>Assistant Physical Chemist</i> : distribution of minerals in Indian soils.   | 2     |
| Dr. A. C. Bose, B.Sc. (Hons.), Ph.D., A.I.C., <i>Officiating Assistant Organic Chemist</i> : insecticides and other agricultural analysis.                       | 2     |
| Dr. H. D. Bhoomik, M.Sc., Ph.D., <i>Officiating Assistant Soil Chemist</i> : fertility status of Indian soils and its amelioration.                              | 2     |
| Dr. N. D. Vyas, M.Sc., Ph.D., <i>Assistant Soil Microbiologist</i> : phosphate fixation by micro-organisms.  | 24    |

SUGARCANE BREEDING STATION COIMBATORE, South India, Tel. : 188. 'Grams : " Sugarcane."

|  |      |
|--|------|
| Nand Lal Dutt, M.Sc., F.A.Sc., <i>Sugarcane Expert</i> : breeding of economic types of sugarcane for tropical and sub-tropical India ; study of <i>Saccharum</i> and related genera for hybridisation. | 1, 4 |
| M. K. Krishnaswami, M.A., <i>Assistant Sugarcane Expert</i> : morphology of <i>Saccharum</i> with special reference to economic characters.  | 4    |

- S. K. Mukherjee, M.Sc., *Assistant Botanist*, Spontaneum Expedition Scheme : exploration of wild *Saccharums* and allied genera and their taxonomic studies. 3
- K. V. Gopala Iyer, B.A., Dip. Tech., *Chemist* : constituents of sugarcane juice in seeding canes with reference to manufacturing qualities. 5
- Miss R. Shah, B.Agr., M.Sc. (Mich.), *Plant Physiologist* (temporary): physiology of flowering in sugarcane. 3

### Indian Veterinary Research Institute

- Mukteswar, Kumaon. Tel : Naini Tal 248.
- Dr. S. Datta, D.Sc., M.R.C.V.S., D.T.V.M., F.R.S. (Edin.), F.N.I., *Director*. 1
- V. R. Rajagopalan, G.M.V.C., Dip. Bacteriology, *Research Officer* (T.B. and J.D.). 22
- Dr. H. N. Ray, M.Sc., Ph.D. (Lond.), F.R.S.T.M. (Lond.), F.A.S.P., *Officer-in-Charge, Section of Parasitology* (officiating). 23
- M. R. Dhanda, L.V.P., M.Sc. (Michigan), Dip. Bacteriology (Lond.), *Assistant Research Officer (Anaerobes)*, (I.C.A.R. Scheme) (officiating). 22
- C. Seetharaman, B.Sc., G.M.V.C., B.V.Sc., *Assistant Research Officer (Bact.)* (officiating). 22
- J. M. Lall, L.V.P., *Assistant Research Officer (Path.)* (officiating). 16
- B. N. Soni, B.Sc. (Agr.) (Edin.), *Officer-in-Charge, (Hides and skins, I.C.A.R. Schemes)* (officiating). 19
- Dr. R. Mukerjee, Ph.D., *Assistant Research Officer (Biochemistry)* (officiating). 25
- M. K. Sreenivasan, G.M.V.C., *Veterinary Officer*. 18
- N. C. Sen, G.B.V.C., *Assistant Research Officer (TB.. and J.D.)* (I.C.A.R. Scheme) (officiating) 22
- Sardar Gian Singh, L.V.P., *Assistant Research Officer (Training)* (Hides and Skins) (officiating) 19

### Indian Veterinary Research Institute

Izatnagar. Tel. : Bareilly 96.

#### BIOLOGICAL PRODUCTS SECTION

- Balwant Singh, G.P.V.C., *Officer-in-Charge*. 22
- D. A. Munro, G.C.V.C., *Research Officer (Production)* (officiating). 22
- S. K. Chaudhuri, G.C.V.C., *Assistant Research Officer* (officiating) 22
- M. S. Menon, G.V.Sc., *Assistant Research Officer* (officiating). 22

#### ANIMAL NUTRITION SECTION :

- Dr. N. D. Kehar, Sc.D., *Officer-in-Charge*. 15
- Dr. S. N. Ray, Ph.D., *Research Officer* : physiology. 13
- T. S. Krishnan, M.Sc., *Research Officer (Vanaspati Scheme, I.C.A.R.)* (officiating). 15
- Dr. D. N. Mullick, Ph.D., *Assistant Research Officer* : biochemistry. 25
- Dr. B. N. Majumdar, Ph.D., *Assistant Research Officer* : biochemistry (officiating). 25
- N. K. Ayyar, B.A., *Assistant Research Officer (Training)*. 15



|  |               |
|--|---------------|
| Dr. K. Chandra, Ph.D., B.Sc. (Agr.), <i>Assistant Research Officer : biochemistry (officiating).</i>   | Subject<br>25 |
| Dr. K. Sahai, M.Sc., Ph.D., <i>Assistant Research Officer (Vanaspati Scheme, Ministry of Food) (officiating).</i>  | 15            |
| Prithvichand Sawhney, M.Sc., <i>Assistant Research Officer in the scheme on the bearing of nutrition on the helminthic infestations of animals. (officiating).</i> | 15            |

#### POULTRY RESEARCH SECTION

|   |    |
|---|----|
| S. Ganapathy Iyer, G.M.V.C., <i>Officer in Charge.</i>                                    | 18 |
| Capt. S. B. V. Rao, L.V.P. (Hons.), <i>Research Officer (Pathology) (officiating).</i>    | 16 |
| Dr. S. Bose, Ph.D., <i>Assistant Research Officer : biochemistry.</i>                     | 25 |
| D. Parthasarathy, M.Sc., <i>Assistant Research Officer : biochemistry. (officiating).</i> | 25 |
| H. P. Tandon, L.V.P. (Hons.), <i>Assistant Research Officer : poultry. (officiating).</i> | 18 |
| B. M. Thakral, <i>Assistant Research Officer : training (officiating).</i>                | 18 |

#### SECTION OF PARASITOLOGY

|   |    |
|---|----|
| Dr. B. C. Basu, D.Sc., <i>Research Officer : entomology.</i>  | 19 |
| Dr. H. D. Srivastava, D.Sc., <i>Research Officer : helminthology.</i>   | 21 |
| P. B. Menon, B.A., <i>Assistant Research Officer : entomology (officiating).</i>  | 19 |
| S. B. Manshani, B.Sc., <i>Assistant Research Officer : helminthology. (officiating).</i>  | 21 |
| S. C. Dutt, M.Sc., <i>Assistant Research Officer in the scheme for investigations into the life histories of helminth parasites of immediate importance to farm stock with a view to determining their pathogenicity, treatment and prevention (officiating).</i> | 21 |

#### ANIMAL GENETICS SECTION

|  |    |
|--|----|
| Dr. P. Bhattacharya, M.Sc., Ph.D., <i>Officer-in-Charge.</i>   | 14 |
| Dr. S. S. Prabhu, Ph.D., <i>Research Officer : artificial insemination. (officiating).</i>   | 14 |
| D. P. Mukherjee, M.Sc., <i>Assistant Research Officer : training (officiating).</i>  | 14 |
| M. P. Johari, G.B.V.C., M.R.San.I., <i>Assistant Research Officer. artificial insemination (officiating).</i>  | 14 |
| Chet Ram, B.A., L.V.P., <i>Assistant Research Officer (Artificial Insemination Centre, Patna) (officiating).</i>                                       | 14 |
| Gajjan Singh, B.V.Sc., G.M.V.C., <i>Assistant Research Officer (Artificial Insemination Centre, Calcutta) (officiating).</i>                           | 14 |
| Dr. A. Roy, M.Sc., Ph.D., <i>Assistant Research Officer : hormones. (officiating).</i>   | 14 |
| S. V. Chandiramani, B.V.Sc. (Agr.), M.S. (Texas, U.S.A.), <i>Assistant Research Officer (Artificial Insemination Centre, Bangalore) (officiating).</i> | 14 |

**PATHOLOGY AND BACTERIOLOGY SECTION**

- P. R. Krishna Iyer, G.M.V.C., *Research Officer* : disease investigation. (officiating). 16
- K. C. Sinha, G.B.V.C., *Assistant Research Officer* : disease investigation (officiating). 16

**VETERINARY SECTION**

- Tufail Ahmad Siddiqui, G.C.V.C., *Veterinary Officer*. 18

**Forest Research Institute**

P.O. New Forest (Dehra Dun), U.P. (Tel. : 596, 693 Dehra Dun).

**ADMINISTRATION**

- C. R. Ranganathan, M.A., I.F.S., *President, Forest Research Institute and Colleges. Head of administration of the Forest Research Institute and organization of research work carried on by the Institute*. 1, 10, 11
- S. Krishna, C.I.E., Ph.D., D.Sc. (Lond.), F.I.C., F.N.I., *Director of Forest Research* : to assist the President in the direction of research. 1, 10, 11
- B. R. Ramchandani, B.A., *Registrar* : to help the President, Forest Research Institute and Colleges in administration. 1
- C. A. R. Bhadrán, M.A., M.B.E., I.F.S., *Publicity and Liaison Officer* : publicity of research work carried out by the branches ; general editing, printing and distribution of publications : library organisation. *Secretary, Central Advisory Board for India on Forest Utilization*. 1, 10, 11

**BOTANICAL BRANCH**

- K. D. Bagchee, M.Sc. (Cal.), D.Sc. (Lond.), D.I.C., F.N.I., *Mycologist and Acting Forest Botanist, Head of Botanical Branch* : damage by fungi (mycology) to living trees and to felled timber. 3, 6, 20
- M. B. Raizada, M.Sc., *Systematic Botanist* : systematic botany and ecology. 3
- B. K. Bakshi, Ph.D., *Junior Research Officer, Assistant Botanist (Mycology)* : to assist mycologist. 20

**SILVICULTURAL BRANCH**

- Jagdamba Prasad, B.Sc., LL.B., *Silviculturist, Head of the Silvicultural Branch* : speeding up, improving and cheapening production ; collection, recording and dissemination of information regarding the large varieties of trees in India ; study of existing crops and their response to different methods of treatment and experiments in the raising of new crops ; standardisation of methods of research, organisation of investigations, and computation of data collected by local forest officers. 7, 8, 10, 12
- G. S. Puri, M.Sc., Ph.D. (Luck. and Lond.), F.G.S., F.L.S., *Senior Research Officer, Ecologist* : ecological study of Indian forests as 2, 4, 12

an aid to silviculture ; ecology of erosion in the Siwalik Hills ; nutritional requirements of Indian trees ; teaching forest ecology and plant geography to forestry students.

- R. S. Gupta, M.Sc., Ph.D. (Leeds), A.I.E., *Soil Chemist* : survey of forest soils, methods of dry farming, etc. ; teaching soil science to forestry students. 2

#### WOOD TECHNOLOGY BRANCH

- K. A. Chowdhury, M.B.E., B.A. (Cal.), D.Sc. (Edin.), M.S. (Syra.), *Wood Technologist, Chief Research Officer, Head of the Branch* : wood anatomy pure and applied. 3, 11
- S. S. Ghosh, M.Sc., *Assistant Wood Technologist* : wood anatomy. 3, 11
- K. Ramesh Rao, M.A., B.Sc. (Hons.), *Assistant Wood Technologist* : wood anatomy. 3, 11

#### WOOD SEASONING BRANCH.

- M. A. Rehman, M.Sc., A.R.I.C., A.Inst.P., *Senior Research Officer, Head of the Branch* : natural and artificial methods of seasoning timber, physical properties of wood ; testing Indian woods for shuttles, bobbins and other wood-working industries. 11
- Jai Kishen, M.Sc. (Physics), *Junior Research Officer* : general assistance to the head of the branch. 11

#### WOOD-WORKING AND TIMBER MECHANICS BRANCH

- S. N. Kapur, Ph.D., A.M.I.Chem.E., F.N.I., *Chief Research Officer, Head of the Branch* : practical tests on working qualities of Indian woods, and on the suitability of Indian timbers for various uses. 11, 30
- V. D. Limaye, B.E. (Mech.), *Senior Research Officer, Timber Testing Officer* : determination of various strength properties of Indian timbers, plywood and wooden containers. 11
- Syed Mohammed Hasnain, M.E.E. (Roorkee), *Junior Research Officer, Assistant Timber Testing Officer*. 11

#### COMPOSITE WOOD AND WOOD PRESERVATION BRANCH

- D. Narayanamurti, M.Sc., Dr.Ing., A.I.I.Sc., F.R.I.C., F.Inst.P., A.M.I.Chem.E., F.N.I., *Chief Research Officer, Head of the Branch* : study and development of wood preservatives and wood preservation processes including fire retardant treatments; adhesives, development, methods of application, etc. ; improved wood (including plywood) development and uses chemistry of wood and bark and utilization of wood waste (boards, etc.) ; physical properties of composite wood products, etc. 11
- A. Purushottam, M.Sc., D.Sc., F.Inst.P., *Assistant Wood Preservation Officer* : permeability of wood to air and corrosion of metals by wood. 11
- Nirmal Chand Jain, M.Sc., A.H.B.T.J., *Assistant Wood Preservation Officer* : adhesives from cashew nut shell liquid, physical properties of composite wood, influence of treatment on properties of wood. 11



- B. N. Prasad, M.Sc., *Junior Research Officer* : mechanism of fire retardant action (physical aspects) ; accelerated methods of setting adhesives and production of laminated wood ; damping of wood. 11

CELLULOSE AND PAPER BRANCH

- M. P. Bhargava, M.Sc., A.I.C., *Chief Research Officer, Head of the Branch* : test of raw material, pulp and paper in the laboratory; production of paper on a semi-commercial scale from Indian raw materials. 11
- Chattar Singh, B.A., *Assistant Paper Pulp Officer* : pulp and paper technology, cellulose chemistry ; production of newsprint-grade mechanical pulp, chemical and dissolving pulps, paper and boards, analysis of water for industrial purposes. 11
- Kartar Singh, M.Sc., *Junior Research Officer*. 11
- S. R. D. Guha, M.A., M.Sc., Ph.D., *Junior Research Officer*. 11

ENTOMOLOGICAL BRANCH

- N. C. Chatterjee, D.Sc., F.N.I., *Forest Entomologist, Head of the Entomological Branch* : damage by insects both in the forest and to forest produce ; biological control of forest pests ; general survey of the life cycles, food plants, geographical distribution, natural enemies and particular ecological features of the forest insect fauna of India, and intensive investigation of certain major pests. 19
- R. N. Mathur, M.Sc., Ph.D., *Senior Research Officer, Systematic Entomologist* : taxonomic study of the immature stages of coleoptera, lepidoptera and Diptera (tachinidae) ; exploratory work on termites and their classification. 19
- G. D. Bhasin, B.Sc., *Junior Research Officer* : general systematics ; taxonomic studies of the immature stages of Indian lepidoptera (pyralidae). 19
- P. N. Chatterjee, B.Sc. (Hons.), M.Sc., D.Phil. (Allahabad), F.E.S., *Junior Research Officer* : forest entomological problems ; protection of trees and bamboos (felled, converted and stored) from ruination by insects, investigations into the control of termites ; systematics of forest parasite, forest parasite oogenesis ; education. 19

CHEMISTRY AND MINOR FOREST PRODUCTS BRANCH.

- R. L. Badhwar, M.Sc., *Offg. Chief Research Officer, Head of the Branch, also Officer-in-Charge, Minor Forest Products Section* : research in economic botany, particularly medicinal, poisonous, and essential-oil-bearing plants and vegetable tanning materials. 11, 12
- S. V. Puntambekar, M.Sc., Ph.D. (Illinois), F.A.Sc., *Senior Research Officer (Chemist)* : chemical research aiming at commercial exploitation of minor forest products involving chemical investigations and analysis and advisory work. 11, 24, 25
- P. N. Deogun, B.A., P.F.S., *Deputy Conservator of Forests* : working as forest officer for cultivation, etc., of medicinal and other economic plants. 11, 12

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|  | Subject |
| P. S. Rao, M.Sc. (Hons.), D.Sc., F.A.Sc., <i>Junior Research Officer (Junior Chemist)</i> : engaged on the utilization and investigation of gums, pectins, mucilages, etc.               | 11, 25  |
| B. S. Varma, B.Sc., <i>Junior Research Officer (Analytical Chemist)</i> : engaged on the chemical analyses of minor forest products, particularly drugs and essential oils.              | 24, 25  |
| G. R. Hingorani, M.Sc., <i>Junior Research Officer (Assistant Minor Forest Products Officer)</i> : engaged on the survey of minor forest products and pharmacognosy of medicinal plants. | 11      |
| H. S. Rao, M.Sc., D.Sc., <i>Junior Research Officer (Documentation Officer)</i> : documenting research information ; publication and editorial work.                                     | 11, 29  |

#### STATISTICAL BRANCH

|   |            |
|---|------------|
| K. R. Nair, M.A., M.Sc., Ph.D., F.S.S., <i>Senior Research Officer, Statistician, Head of the Branch</i> : design of experiments in all the Research Branches and Statistical analysis of results and interpretation ; advice on statistical aspects of all experimental work in the forests of India including forest surveys ; statistical training to forest officers. | 10, 11, 29 |
| R. P. Bhargava, M.Sc. (Mathematics), M.Sc. (Statistics), B.L., <i>Junior Research Officer, Assistant Statistician.</i>  | 29         |

#### Central Potato Research Institute

##### I. MAIN INSTITUTE, Patna.

|  |         |
|--|---------|
| S. Ramanujam, M.A., Ph.D. (Lond.), F.N.I., <i>Director, Central Potato Research Institute, Patna</i> (temporary) : holds permanent substantive post as Cyto-Geneticist, Indian Agricultural Research Institute, New Delhi : Cyto-genetics and breeding of crop plants ; (Tel. : Residence : 917 ; Office : 923). | 1, 3, 4 |
| M. J. Thirumalachar, M.Sc., D.Sc., Ph.D. (Wis.), <i>Plant Pathologist, Central Potato Research Institute, Patna</i> (temporary) : plant pathology and mycology.  | 3       |
| T. J. Chellaramani, B.Agr., <i>Assistant Botanist, Central Potato Research Institute, Patna</i> (temporary) : plant breeding and agronomy.   | 3       |

##### II. POTATO BREEDING SUB-STATION, Simla.

|  |      |
|--|------|
| Pushkarnath, M.Sc., Ph.D., Assoc.I.A.R.I., <i>Botanist, Potato Breeding Sub-Station, Simla</i> (temporary) : plant breeding ; genetics and viruses. (Tel. : 2326). | 3, 4 |
| M. L. Khanna, B.Sc.Agr., Assoc.I.A.R.I., <i>Assistant Botanist, Potato Breeding Sub-Station, Simla</i> (temporary) : plant breeding.                               | 4    |

##### III. POTATO MULTIPLICATION SUB-STATION, Bhowali.

|  |   |
|--|---|
| D. Srinivasachar, M.Sc., Assoc.I.A.R.I., <i>Assistant Botanist, Potato Multiplication Sub-Station, Bhowali</i> (temporary) : plant breeding. | 4 |
|--|---|

IV. POTATO CERTIFICATION SUB-STATION, Kufri.

B. B. Thakur, B.Sc.Agr., *Assistant Botanist, Potato Certification Sub-Station, Kufri* (temporary) : plant breeding and agronomy.

**Indian Dairy Research Institute**

Bangalore. (Tel. : 139).

Dr. K. C. Sen, D.Sc., F.N.I., *Director of Dairy Research* : nutritive value of cattle foods ; carotene metabolism ; composition and quality of milk ; vitamin A and carotene in milk and butter ; calcium metabolism with special reference to oxalic acid in feeding stuffs ; development of dairy education and research.

21

**DAIRY CHEMISTRY SECTION**

Dr. K. P. Basu, M.Sc., Ph.D., D.Sc., *Dairy Chemist* : chemistry of milk and milk products in general ; enzymes in milk ; vitamins, non-protein nitrogen and lipoids in milk ; vegetable rennet ; value of hydrogenated oils.

21

Dr. N. N. Dastur, Ph.D., A.I.I.Sc., *Second Dairy Chemist* : effect of administration of thyroxine on milk yield in cows and buffaloes ; effect of souring of milk on chemical composition ; vegetable rennet ; causes of spoilage of ghee.

21

Dr. C. P. Anantakrishnan, Ph.D., A.I.I.Sc., F.R.I.C., *Assistant Dairy Chemist* : nutritive value of fodders with special reference to carotene metabolism.

21

Dr. T. M. Paul, Ph.D., A.R.I.C., A.M.Tech.I., *Assistant in Dairy Chemistry* : detailed composition of the milk of different breeds of cows, buffaloes, goats and sheep.

21

A. Kanna, M.Sc., *Technical Assistant* : enzymes in milk.

21

D. Venkatappiah, B.Sc. (Hons.), *Technical Assistant* : non-protein nitrogen in milk.

21

G. K. Murthy, B.Sc., *Milk Tester*.

21

R. Venkateswara Rao, B.Sc., *Research Assistant* : vitamins in milk with special reference to vitamin B complex.

21

Arun Sen Gupta, M.Sc., *Assistant in Chemistry* : nutritive value of hydrogenated oils ; composition of buffalo milk proteins.

21

S. R. Jayashanker, B.Sc., *Assistant in Chemistry* : nutritive value of hydrogenated oils.

21

N. B. Shroff, B.Agr., *Research Assistant* : preparation of vegetable rennet.

21

Miss K. R. Lalitha, B.Sc., *Honorary Research Worker* : cause of spoilage of ghee.

21

Miss G. S. Lily, B.Sc., *Honorary Research Worker* : lipoids in milk.

21

R. N. Kak, I.D.D., *Supervisor* : vegetable rennet.

21

**DAIRY TECHNOLOGY SECTION**

Dr. S. C. Ray, Ph.D., *Dairy Technologist* : handling, processing and distribution of market milk and manufacture of milk products.

21

M. K. Sastri, B.A., I.D.D., A.I.D.I., *Assistant Research Officer* : technology of long distance transport of milk.

21



|   |               |
|---|---------------|
| Miss Dr. P. Devi, Ph.D., <i>Assistant Dairy Technologist</i> : technology of manufacture of ghee.                             | Subject<br>21 |
| M. R. Srinivasan, M.A., A.I.I.Sc., <i>Technical Assistant</i> : physico-chemical control in the manufacture of milk products. | 21            |
| L. P. Maruthamuthu, I.D.D., <i>Technical Assistant</i> : manufacture of milk products.  | 21            |
| K. S. Gunnery, B.Sc., <i>Research Assistant</i> : bacteriology of long distance transport of milk.                            | 21            |
| Sukumar De, B.Sc., I.D.D., <i>Research Assistant</i> : manufacture of milk products.  | 21            |
| K. C. Nayar, B.Sc., <i>Technical Assistant</i> : technology of manufacture of ghee.   | 21            |
| Miss J. S. Khambatta, B.Sc., <i>Research Assistant</i> : chemistry of long distance transport of milk.                        | 21            |
| M. S. Pherwani, B.Agr., A.I.D.I., <i>Technical Assistant</i> : technology of manufacture of ghee.                             | 21            |
| G. S. Mani, B.Sc., <i>Laboratory Assistant</i> : technology of manufacture of ghee.   | 21            |
| M. C. Badami, B.Sc., <i>Hon. Research Worker</i> : manufacture of milk products.  | 21            |

#### DAIRY BACTERIOLOGY SECTION

|   |    |
|---|----|
| Dr. K. K. Iya, Ph.D., A.I.I.Sc., I.D.D. (Hons.), <i>Dairy Bacteriologist</i> : bacteriology of milk and milk products ; dairy detergents ; nutrition of lactic acid bacteria. | 21 |
| H. Laxminarayana, M.Sc., <i>Assistant Dairy Bacteriologist</i> : bacteriology of milk and milk products.  | 21 |
| Kerala Verma, B.Sc., I.D.D., <i>Assistant Bacteriologist</i> : bacteriological quality of market milk.  | 21 |
| F. D. Aibara, B.Sc., <i>Assistant in Dairy Bacteriology</i> : bacteriology of milk.   | 21 |
| V. Lakshminarasim, B.Sc., <i>Technical Assistant</i> : cocci in milk.   | 21 |
| V. K. N. Nambudripad, B.Sc., <i>Technical Assistant</i> : effect of different chemical agents in the micro-organisms of milk.   | 21 |
| B. N. Gopalakrishna, B.Sc., <i>Hon. Research Worker</i> : coliform bacteria in milk.  | 21 |
| V. Sreenivasamurthy, B.Sc., <i>Hon. Research Worker</i> : nutritional requirements of lactic acid bacteria.   | 21 |

#### DAIRY HUSBANDRY SECTION

|   |    |
|---|----|
| M. C. Rangaswamy, I.D.D., N.D:D. (Scot.), <i>Dairy Husbandry Officer</i> : dairy husbandry. | 21 |
| A. J. Lazarus, I.D.D., <i>Superintendent</i> : dairy cattle management. Tel. 139 link.      | 21 |
| D. Narayan, I.D.D., <i>Assistant Dairy Husbandry Officer</i> : dairy cattle management.     | 21 |
| T. A. Narayanaswamy, L.E.E., <i>Farm Engineer</i> : dairy engineering.                      | 21 |
| S. Vijaya Rao, L.Agr., <i>Technical Assistant</i> : fodder crop production.                 | 21 |
| Ranjit Singh, I.D.D., <i>Technical Assistant</i> : cattle management.                       | 21 |
| N. Lakshminarayana, L.E.E., L.M.E. : dairy engineering.                                     | 21 |

## REPUBLIC OF INDIA

Subject

|   |    |
|---|----|
| C. S. Dharmarajan, B.A., <i>Research Assistant</i> : dairy cattle nutrition.      | 21 |
| S. N. Anantharamiah, B.Sc., <i>Research Assistant</i> : biochemistry (dairying.)  | 21 |
| G. M. Azmathulla, I.D.D., <i>Supervisor</i> : dairy products.                     | 21 |
| S. P. Thomas, I.D.D., <i>Supervisor</i> : dairy products.                         | 21 |
| K. Ananthaswamy, I.D.D., <i>Supervisor</i> : fodder production.                   | 21 |
| T. V. Arunachalam, I.D.D., <i>Supervisor</i> : cattle management.                 | 21 |
| H. Narasimhaswamy, I.D.D., <i>Supervisor</i> : cattle management.                 | 21 |
| S. Nagarajan, B.Sc. (Agr.), <i>Hon. Research Worker</i> : dairy cattle nutrition. | 21 |
| R. K. Sen, B.Sc. (Agr.), <i>Hon. Research Worker</i> : dairy cattle nutrition.    | 21 |

### MILK POWDER SCHEME, Anand.

|  |    |
|--|----|
| K. K. Desai, I.D.D., C.D.D. (Glas.), N.D.D. (Scot.), <i>Technical Officer</i> : preparation and properties of milk powder. | 21 |
| V. R. Bhale Rao, M.Sc., <i>Dairy Biochemist</i> : preparation and properties of milk powder.                               | 21 |
| V. G. Kothanda Pani, L.M.E., <i>Dairy Engineer</i> : dairy engineering.  | 21 |
| Verghese Kurien, B.Sc., B.E. (Hon.), M.S. (U.S.A.), <i>Dairy Engineer</i> : dairy engineering.                             | 21 |

### Central Rice Research Institute

Cuttack, Orissa.

|  |       |
|--|-------|
| K. Ramiah, M.Sc., Dip. Agr. (Cantab.), L.Agr., F.N.I., F.A.Sc., 1, 4, 6, 12, F.N.A.Sc., <i>Director</i> : direction of research on rice—genetics, breeding, pathology, agronomy and bio-chemistry. | 25    |
| R. L. M. Ghose, M.Sc., <i>Geneticist and Botanist</i> : genetics and breeding of rice.   | 4     |
| S. Y. Padmanabhan, B.Sc. (Hons.), Assoc., I.A.R.I., <i>Mycologist</i> : plant pathology ; mycology.  | 6, 20 |
| M. V. Vachhani, B.Agr., Ph.D., Assoc. I.A.R.I., <i>Agronomist</i> : agronomy.  | 12    |
| P. Israel, M.A., <i>Entomologist</i> : entomology.   | 19    |
| T. P. Abraham, M.A., <i>Statistician</i> : statistics.   | 29    |
| M. Subbiah Pillai, B.A., B.Sc. (Agr.), <i>Farm Superintendent</i> .  | 12    |
| C. T. Abichandani, M.Sc., Ph.D., A.R.I.C., <i>Assistant Chemist</i> : soils, fertilizers and plant nutrition.  | 2     |
| W. T. Butany, B.Sc. (Agr.) Hons., Assoc. I.A.R.I., <i>Assistant Botanist</i> : genetics and breeding of rice.  | 4     |
| Durgadas Ganguly, M.A., <i>Assistant Mycologist</i> : plant pathology ; mycology.  | 6, 20 |

### Central College of Agriculture

Anand Parbat, Karol Bagh, Delhi. (Tel. : 40217).

|  |        |
|--|--------|
| Dr. T. J. Mirchandani, M.Sc., A.I.I.Sc., Ph.D. (Lond.), <i>Principal and Head of Institution</i> : agronomy.   | 1      |
| K. G. Bhandari, M.Sc. (Hons.), M.Sc. (Agr.), <i>Head of Entomology-Zoology Section</i> : entomology ; zoology. | 19, 23 |

|   |                 |
|---|-----------------|
| Dr. Jaswant Singh, Ph.D. (Wales), <i>Head of Agricultural Section : agriculture.</i>                                | Subject<br>1, 2 |
| Dr. S. M. Sircar, M.Sc., Ph.D. (Lond.), D.I.C., <i>Head of Agricultural Botany Section : agricultural botany.</i>   | 3, 4, 12        |
| J. R. Badola, B.Sc. (Agr. Eng.), <i>Assistant Professor of Agricultural Engineering : agricultural engineering.</i> | 28              |
| Dr. Y. V. Kathavate, Ph.D., <i>Assistant Professor of Mathematics and Physics : physics and mathematics.</i>        | 29              |

### Indian Central Sugarcane Committee

|  |           |
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| New Delhi, India. (Tel. : 8676).                 |           |
| Sardar Datar Singh, <i>Ex-officio President.</i> | 1, 17, 18 |
| R. D. Bose, B.Sc., <i>Secretary.</i>             | 24, 29    |

### Indian Institute of Sugar Technology

|   |            |
|---|------------|
| Kanpur. (Tel. : 2571).  |            |
| S. C. Roy, M.B.E., <i>Director.</i>   | 1          |
| H. S. Chaturvedi, B.Sc., Dip.T.I., M.S. (La.), <i>First Assistant.</i>  | 23, 24, 25 |
| H. D. Sen, M.Sc., Ph.D. (Lond.), D.I.C., <i>Bio-Chemist.</i>  | 25         |
| D. G. Wallawalker, B.Agr. (Bom.), M.S. (La., U.S.A.), <i>Assistant Professor of Sugar Chemistry and Manufacture.</i>    | 23, 24, 25 |
| Dr. K. S. G. Doss, D.Sc., F.R.I.C., F.Inst.P., F.A.Sc., <i>Physical Chemist.</i>  | 2, 24      |
| Dr. S. Mukherjee, M.Sc., Ph.D. (Cantab.), A.R.I.C., A.I.I.Sc., <i>Assistant Professor of Sugar Chemistry (Organic).</i> | 5, 24      |
| G. P. Bhargava, B.Sc. (Eng.).   | 28         |
| M. G. Nayar, M.A., <i>Statistician (Offg).</i>  | 27, 29     |

### Indian Central Cotton Committee

|   |      |
|---|------|
| Indian Mercantile Chambers, Nicol Road, Ballard Estate, Bombay. |      |
| Kalidas Sawhney, M.Sc., F.A.S., <i>Secretary.</i>               | 1, 4 |
| M. S. Natesan, M.A. (Mad.), <i>Statistician.</i>                | 29   |
| K. Dharmarajulu, M.Sc. (Bom.), <i>Technical Officer.</i>        | 4, 6 |

### TECHNOLOGICAL LABORATORY

|   |       |
|---|-------|
| D. L. Sen, M.Sc. (Tech.) (Man.), M.Sc. (Bom.), A.I.I.Sc., F.R.I.C., <i>Director.</i>      | 1, 24 |
| N. Hari Rao, M.Sc. (Cal.), <i>Senior Research Assistant, Physicist.</i>                   | 28    |
| Amarnath Gulati, M.Sc. (Ph.), <i>Senior Research Assistant (Microscopist).</i>            | 23    |
| V. V. Gupte, B.Sc. (Tech.) (Man.), <i>Spinning Master.</i>                                | 28    |
| V. Venkataraman, M.A. (Mad.), <i>Senior Research Assistant, Statistician.</i>             | 29    |
| C. Nanjundayya, M.Sc. (Cal.), <i>Junior Research Assistant, Physicist.</i>                | 28    |
| R. L. N. Iyengar, D.Sc. (Mad.), <i>Junior Assistant, Physicist.</i>                       | 28    |
| S. Rajaraman, B.A., D.Sc. (Bom.), A.Inst.P., <i>Junior Research Assistant, Physicist.</i> | 28    |



INSTITUTE OF PLANT INDUSTRY,  
Indore.

|  |        |
|--|--------|
| Dr. D. V. Bal, M.Sc., Ph.D. (Nag.), <i>Director</i> . (Tel. 83).           | 1, 2 ✓ |
| Dr. V. G. Panse, B.Sc., Ph.D. (Lond.), <i>Deputy Director (Research)</i> . | 4, 29  |
| P. D. Gadkari, M.Sc., <i>Economic Botanist</i> .                           | 4      |
| Bholanath, M.Sc., <i>Second Economic Botanist</i> .                        | 4      |
| Simlote, M.Sc. (Agr.) (Hons.), B.Agr., <i>Assistant Botanist</i> .         | 4      |
| D. Ganeshan, M.A., M.Sc., <i>Assistant Botanist</i> .                      | 3, 4   |
| H. P. Bhatia, B.Sc. (Agr.), <i>Botanical Assistant</i> .                   | 4      |
| N. R. Bhide, B.Sc. (Agr.), <i>Assistant Agronomist</i> .                   | 7, 12  |
| N. T. Nadkarni, B.Agr., <i>Entomologist</i> .                              | 19     |
| J. L. Merh, M.Sc., <i>Plant Pathologist</i> .                              | 6, 20  |

SCHEME FOR COTTON PHYSIOLOGICAL RESEARCH, INSTITUTE OF  
PLANT INDUSTRY, Indore. (Tel. : 183).

|  |    |
|--|----|
| Prof. R. H. Dastur, O.B.E., F.L.S., F.N.I., M.Sc. (Bom.), <i>Plant Physiologist</i> : general botany and plant physiology. | 3  |
| K. M. Samant, M.Sc. (Bom.), Ph.D. (Liverpool), <i>Biochemist</i> : bio-chemistry.  | 25 |

RESEARCH SCHEMES

INDIAN INSTITUTE OF SCIENCE, BANGALORE

|  |   |
|--|---|
| <i>Scheme for the investigation of stability of nitrogenous fertilisers in Indian soils with special reference to their availability for cotton.</i> |   |
| S. Balasundaram, B.Sc., A.I.I.Sc., <i>Research Assistant</i> .   | 5 |

ASSAM

|   |   |
|---|---|
| <i>Scheme for improvement of Hill cotton.</i>   |   |
| Dr. S. R. Barooah, B.Sc. (Agr.), M.Sc. (Agr.—Bot.), Ph.D., <i>Economic Botanist</i> , Jorhat. | 4 |

MYSORE

|  |   |
|--|---|
| <i>Scheme for breeding Sea-Island and Egyptian Cottons in Mysore State.</i>                      |   |
| Dr. L. S. Doraiswami, M.Sc., Ph.D., <i>Economic Botanist</i> , Bangalore.                        | 4 |
| G. Srinivasa Iyenger, M.Sc., <i>Senior Assistant Botanist</i> , Visveswariah Canal Farm, Mandya. | 4 |

BOMBAY

|  |   |
|--|---|
| <i>Broach Cotton Breeding Scheme.</i>                                      |   |
| B. J. Thakar, B.Agr., <i>Cotton Breeder</i> , Broach.                      | 4 |
| <i>Scheme for Cotton Breeding in Khandesh.</i>                             |   |
| T. R. Khadilkar, B.Agr., M.Sc. (Cornell), <i>Cotton Breeder</i> , Jalgaon. | 4 |
| <i>Poona Cotton Wilt Breeding Scheme.</i>                                  |   |
| Dr. M. K. Patel, Ph.D. (Iowa), <i>Plant Pathologist</i> , Poona.           | 6 |

- Breeding of Wilt-resistant cottons in Surat area.*  
G. B. Patel, B.Agr., M.Sc. (Calif.), Cotton Botanist, Surat. 4
- Scheme for improvement of Wagad Cotton at Viramgam and Bavla.*  
D. S. Sheth, B.Agr., M.Sc. (Ohio), Cotton Breeder, Viramgam. 4
- Scheme for improvement of Dharwar-American Cotton.*  
S. G. Kelkar, B.Agr., Cotton Breeder, Dharwar. 4
- Inter-specific Hybridisation in cottons at Surat.*  
G. B. Patel, B.Agr., M.Sc. (Calif.), Cotton Botanist, Surat. 4

## MADRAS

- Scheme for improvement of Mungari cotton.*  
G. Seshadri Ayyangar, M.A., M.Sc. (Bot.), Assistant Cotton Specialist. 4
- Scheme for improvement of Cocanadas cotton.*  
S. Mayandi Pillai, B.Sc. (Agr.), Assistant Cotton Specialist. 4
- Scheme for breeding Cambodia cotton in the Ceded Districts.*  
N. Kesava Iyenger, M.A. (Bot. and Zool), M.Sc. (Lond.), (Bot-Cytogenetics), Assistant Cotton Specialist. 4
- Scheme for production of long staple cotton.*  
Dr. P. Abraham, B.A. (Zool and Bot.), M.Sc. (Bot.), Ph.D. (Lond.) 3, 4  
(Plant Physiology, Regeneration in Plants), Assistant Cotton Specialist.
- Scheme for improvement of Tinnevelly and Karunganni cottons.*  
S. M. Kalyanaraman, B.Sc. (Agr.), Assistant Cotton Specialist. 3
- Scheme for improvement of White Northerns*  
C. Jagannatha Rao, B.A. (Bot. and Geo.), M.Sc. (Agr.), Assistant Cotton Specialist. 3

## UNITED PROVINCES

- Scheme for Hybridisation in Arboreum Cottons*  
Mohd. Anwar Ahmad Ansari, M.Sc., Assistant Economic Botanist : 4  
cotton, fibres and tobacco.

## EAST PUNJAB

- Scheme for improvement of cotton in South-Eastern Districts.*  
S. Avtar Singh, B.Sc. (Agr.) (Punjab), Cotton Breeder. 4
- Scheme for improvement of American cotton suitable for introduction in Sub-montane districts.*  
S. Gurbachan Singh, B.Sc. (Agr.), Agricultural Assistant. 4  
S. Swaran Singh, B.Sc. (Agr.), Agricultural Assistant. 4

CENTRAL PROVINCES AND BERAR

*Scheme for the improvement of cotton of Nagpur-Wardha tract.*  
R. S. Shrivastava, L.Agr., *Research Officer.* 4

*Scheme for the improvement of cotton of Akola-Amraoti Tract.*  
N. P. Deshmukh, B.Agr., *Research Officer.* 4

*Scheme for the improvement of cotton of Ghat-Tract.*  
V. N. Paranjape, B.Sc., *Research Officer.* 4

*Scheme for the improvement of cotton of Buldana Tract.*  
S. L. Nema, B.Sc. (Agr.), *Senior Research Assistant.* 4

POONA

*Co-ordinated Crop Weather Scheme*

Dr. L. A. Ramdas, M.A. (Physics) (Calcutta), Ph.D. (Physics) (Calcutta), F.N.I., F.A.Sc., F.N.A.Sc, *Director of Agricultural Meteorology.* 1

BARODA

*Scheme for improvement of Mathio Cotton at Amreli.*  
Bhalchandra Avadhutrao Phadnis, M.Sc. (Bot.) (Bombay), *Assistant Cotton Breeder, Amreli.* 4

HYDERABAD

*Scheme for improvement of Cotton in Parbhani district.*  
N. R. Yardi, B.Agr. (Bombay), *Cotton Breeder, Parbhani.* 4

*Gaorani Cotton Improvement Scheme.*  
V. K. Bederkar, B.A. (Madras), B.Agr. (Poona), M.S. (America), *Cotton Research Botanist, Nanded.* 4

**Indian Central Jute Committee**

4 Hastings Street, Calcutta.

Dr. J. V. Lakhani, M.Sc., A.I.I.Sc., Ph.D., *Secretary.* 1

**JUTE AGRICULTURAL RESEARCH INSTITUTE**

Dr. B. C. Kundu, M.A., Ph.D., *Director.* 1, 3

B. Das Gupta, M.Sc., *Botanist.* 3

A. T. Sanyal, B.Sc. (A.S.), *Agronomist.*

T. Ghose, M.Sc., *Assistant Mycologist.* 20

N. Dutta, M.Sc., *Assistant Entomologist.* 19

A. K. Paul, M.Sc., *Assistant Botanist.*

**TECHNOLOGICAL RESEARCH LABORATORIES**

Regent Park, Tollygunge, Calcutta. (Tel. : South 834.)

Dr. P. B. Sarkar, D.Sc., F.N.I., *Director : jute science and technology.* 1

Dr. K. R. Sen, D.Sc., *Senior Research Physicist : physical characters of jute and their technological significance.* 7

Dr. H. Chatterjee, M.Sc., D.Phil., F.R.I.C. (Offg.) *Senior Research Chemist : chemical characters of jute and their technological significance.* 5



ECONOMIC RESEARCH SECTION

|  |        |
|--|--------|
| 4, Hastings Street, Calcutta. (Tel. : Burrabazar 4448).                          |        |
| K. C. Basak, B.A. (Cantab.), <i>Director</i> : economics and statistics of jute. | 27, 29 |
| S. M. Gupta, B.Agr., <i>Assistant Marketing Officer</i> .                        | 27     |

Indian Central Tobacco Committee

MADRAS

|   |           |
|---|-----------|
| C. Ramaswami Naidu, M.A. (Cantab.), <i>Secretary</i> .  | 1         |
| Dr. B. S. Kadam, B.Sc. (Iowa), M.Sc., Ph.D. (Cornell), F.N.I., 1, 2, 3, 4, 6, F.A.Sc., <i>Director, Tobacco Research, Central Tobacco Research Institute, Rajahmundry</i> . | 7, 20, 22 |
| Dr. N. L. Pal, D.Sc., F.N.A., <i>Plant Physiologist, Central Tobacco Research Institute, Rajahmundry</i> .  | 3, 5, 6   |
| Dr. Muktar Singh, M.Sc. (Agr.), Ph.D., <i>Agronomist, Central Tobacco Research Institute, Rajahmundry</i> .   | 2, 4, 7   |
| T. Narayana Rao, M.A., Assoc. I.A.R.I., <i>Botanist, Cigarette Tobacco Research Station, Guntur</i> .   | 3, 4, 7   |
| H. T. Khemchandani, B.Sc. (Agr.) (Hons.), <i>Agronomist, Cigarette Research Station, Guntur</i> .   | 2, 4, 7   |
| B. T. Sajnani, B.Agr., <i>Agronomist, Cigar and Cheroot Tobacco Research Station, Veda sandur</i> .   | 2, 4, 7   |
| T. Krishnamoorti, B.Sc. (Agr.), <i>Agronomist, Bidi Tobacco Research Station, Anand</i> .   | 2, 4, 7   |
| D. I. Mathrani, M.Sc. (Agr.), <i>Plant Pathologist, Bidi Tobacco Research Station, Anand</i> .  | 3, 5, 6   |
| A. Anantharaman, B.Sc. (Agr.), <i>Agronomical Assistant, Central Tobacco Research Institute, Rajahmundry</i> .  | 2, 4, 7   |
| R. S. Tyagi, M.Sc. (Agr.), <i>Physiological Assistant, Central Tobacco Research Institute, Rajahmundry</i> .  | 3, 5, 6   |
| A. Sambasiva Sastry, M.Sc., <i>Chemical Assistant, Cigarette Tobacco Research Station, Guntur</i> .   | 5         |
| B. Radhakrishnamurti, B.Sc. (Agr.), <i>Agricultural Assistant, Cigarette Tobacco Research Station, Guntur</i> .   | 2, 7      |
| A. S. Krishnan, B.Sc. (Agr.), <i>Agricultural Assistant, Cigar and Cheroot Tobacco Research Station, Veda sandur</i> .  | 2, 7      |
| G. J. Patel, B.Sc. (Agr.), <i>Agricultural Assistant, Bidi Tobacco Research Station, Anand</i> .  | 2, 7      |
| N. A. Awatramani, B.Sc. (Agr.) (Hons.), <i>Agricultural Assistant, Bidi Tobacco Research Station, Anand</i> .   | 2, 7      |
| N. A. Elias, B.A., M.Sc. (Agr.), <i>Mycological Assistant, Bidi Tobacco Research Station, Anand</i> .   | 20        |

Indian Central Coconut Committee

RESEARCH WORKERS

|  |   |
|--|---|
| K. P. V. Menon, D.Sc., D.I.C., Ph.D. (Lond.), <i>Plant Pathologist, Central Coconut Research Station, Kayamkulam</i> .         | 1 |
| K. Madhusudhanan Pandalai, M.Sc., Ph.D., A.R.I.C. (Lond.), <i>Soil Chemist, Central Coconut Research Station, Kayamkulam</i> . | 2 |
| T. K. Ramamurthy, B.Sc. (Hons.), M.A.M.Sc. (Lond.), <i>Central Coconut Research Station, Kayamkulam</i> .                      | 3 |

## REPUBLIC OF INDIA

|   |              |
|---|--------------|
| U. Karunakaran Nair, B.A., B.Agr., Central Coconut Research Station, Kayamkulam.                              | Subject<br>6 |
| H. Sankara Subramony, B.Sc., <i>Assistant to Soil Chemist</i> , Central Coconut Research Station, Kayamkulam. | 2            |
| J. Antony, B.Sc., Central Coconut Research Station, Kayamkulam.   | 19           |
| A. P. Anandan, B.A., Central Coconut Research Station, Kasaragod.   | 4            |

### Indian Lac Research Institute

|   |   |
|---|---|
| Namkum, Ranchi, Bihar, India. (Tel : Ranchi 104). |   |
| Dr. P. K. Bose, D.Sc., F.N.I., <i>Director</i> .  | 1 |

#### ENTOMOLOGICAL SECTION

|  |  |    |
|--|--|----|
| P. S. Negi, M.Sc., <i>Acting Entomologist</i> .        | } lac entomology<br>and lac cultivation. | 19 |
| S. N. Gupta, M.Sc., <i>Acting Asst. Entomologist</i> . |  |    |
| A. Bhattacharya, <i>Research Assistant</i> .           |  |    |

#### CHEMICAL SECTION

|                               |   |    |
|-------------------------------|---|----|
| M. Venugopalam                | } <i>Research Assistants.</i> chemistry and utilisation of lac. | 24 |
| S. Ranganathan.               |   |    |
| Dr. G. N. Bhattacharya, D.Sc. |   |    |
| Y. Sankaranarayanan, M.Sc.    |   |    |
| T. Bhowmik.                   |   |    |
| P. R. Bhattacharya, M.Sc.     |   |    |
| S. C. Sen Gupta, M.Sc.        |   |    |

### Agricultural Meteorology Section

|   |        |
|---|--------|
| Poona. (Tel. : 2291).   |        |
| Dr. L. A. Ramdas, M.A., Ph.D., <i>Director</i> .                                | 26     |
| A. K. Mallik, M.Sc., B.Sc. (Agr.), Assoc. I.A.R.I., <i>Meteorologist</i> .      | 26     |
| R. K. Misra, M.Sc. (Agr.), <i>Assistant Meteorologist</i> .                     | 26     |
| P. S. Sreenivasan, M.Sc. (Agr.), <i>Assistant Meteorologist, Statistician</i> . | 26, 29 |
| K. M. Gadre, M.Sc. (Agr.), <i>Assistant Meteorologist</i> .                     | 26     |

### Zoological Survey of India

|   |    |
|---|----|
| 34, Chittaranjan Avenue, Calcutta 12. 'Grams : Zoology, Calcutta. Tel. : Central 2182.  |    |
| Dr. M. L. Roonwal, M.Sc., Ph.D. (Cantab.), F.N.I., <i>Assistant Superintendent</i> : locusts.                                     | 19 |
| Dr. A. P. Kapur, M.Sc. (Hons.), Ph.D. (Lond.), D.I.C., Assoc. I.A.R.I., F.R.E.S., <i>Zoologist</i> : coccinellidea and pyralidae. | 19 |
| K. S. Pradhan, M.Sc., <i>Assistant Zoologist</i> : coleoptera and rhynchota.  | 19 |
| T. G. Vazirani, B.Sc. (Hons.), <i>Entomological Assistant (Offg.)</i> , life history of chrysomellid betels.                      | 19 |
| G. Mathai, <i>Assistant, Insect Section</i> .   | 19 |
| Dr. B. S. Chauhan, M.Sc., Ph.D., F.Z.S., <i>Assistant Superintendent</i> .  | 21 |
| M. N. Datta, M.Sc., <i>Curator, Zoological Galleries, Indian Museum</i> : acanthocephala.   | 21 |
| D. K. Ray, M.Sc., <i>Laboratory Assistant</i> : ciliata.  | 23 |
| H. Khajuria, M.Sc., <i>Bird and Mammal Assistant</i> : ciliata.   | 23 |

**Indian Tea Association****Scientific Department Tocklai Experimental Station**

Cinnamara P.O.

C. J. Harrison, B.Sc., A.R.I.C., O.B.E., *Chief Scientific Officer.*

1

**SOIL CHEMISTRY**N. G. Gokhale, B.Sc., *Physical Chemist*: soils and fertilisers.

2, 26

**AGRICULTURAL**S. K. Dutta, B.Sc. (Bom.), B.Sc. (Wales), *Agriculturist*: cultural methods, yield, shade factor, etc., of tea and ancillary crops.

2, 8, 12

**TEA CHEMISTRY**

E. A. H. Roberts, M.A.,

D.Phil., F.R.I.C.

D. J. Wood, B.A.

} *Biochemist.*  
} *Biochemist.*chemistry of tea leaf  
and its influence on quality.

5, 25

**PLANT PATHOLOGY**E. Hainsworth, M.A., *Plant Pathologist.*

6, 22

G. M. Das, M.Sc., Ph.D., D.I.C., *Entomologist.*

19

**BOTANICAL**W. Wight, Ph.D., *Botanist.*

2, 3, 4

**ADVISORY OFFICERS**P. M. Glover, M.B.E., B.Sc., *Advisory Officer*, Assam Valley and North Bank.

2, 6, 8, 19

R. I. MacAlpine, B.Sc., *Advisory Officer*, Darjeeling and Terai.

2, 6, 8, 10

**INDIAN INSTITUTE OF SCIENCE**

Bangalore.

**Department of Biochemistry**

Dr. S. C. Pillai, Ph.D., A.I.I.Sc. : soils, fertilisers and plant nutrition.

2

Dr. C. R. Harihara Iyer, M.A., Ph.D., F.R.I.C. : soils, fertilisers and plant nutrition.

2

H. S. R. Desikachar, B.Sc. (Hons.), A.I.I.Sc. : soils, fertilisers and plant nutrition and plant chemistry.

2

Dr. K. Kutumba Reddi, Ph.D., A.I.I.Sc. : soil, fertilisers and plant nutrition and plant chemistry.

2

S. Balasundaram, B.Sc., A.I.I.Sc. : soils, fertilisers and plant nutrition and plant chemistry.

2

A. M. S. Siddiqui, B.Sc. : plant chemistry.

5

M. Sreenivasaya, B.A., F.I.I.Sc. : biochemistry, bacteriology, and plant husbandry.

22

Dr. M. K. Subramanian, M.A., D.Sc. : bacteriology.

22

B. N. Banerjee, M.Sc. : biochemistry.

25

Dr. K. V. Giri, D.Sc., A.I.I.Sc., F.A.Sc. : biochemistry.

25

C. R. Krishnamurthy, B.Sc. (Hons.), Ph.D. : biochemistry.

25

R. Rajagopalan, B.Sc. (Hons.), Ph.D. : biochemistry.

25



# UNITED PLANTERS' ASSOCIATION OF SOUTHERN INDIA

Subject

|   |   |
|---|---|
| Coonoor, Nilgiris.  |   |
| S. Ananda Rao, M.Sc., <i>Ag. Tea Scientific Officer, Devarshola P.O., Nilgiris.</i> | 9 |
| V. Jayaram, B.A., B.Sc., <i>Soil Chemist, Devarshola P.O.</i>                       | 2 |
| K. S. Venkataramani, M.Sc., <i>Botanist, Devarshola, P.O.</i>                       | 3 |

## UNIVERSITIES

### UNIVERSITY OF BOMBAY

#### Department of Chemical Technology

Matunga, Bombay, 19. Tel : 61308.

|  |   |
|--|---|
| A. Sreenivasan, <i>Lecturer in Foods and Drugs, Head of Section.</i>             | 25  |
| H. R. Pithawalla, <i>Demonstrator in Foods and Drugs : enzymes and vitamins.</i> | 25  |
| S. S. Gothoskar, <i>Research Scholar : enzymes.</i>                              | 25  |
| D. V. Rege, <i>Research Scholar : water soluble-vitamins.</i>                    | 25  |
| R. D. Siganporia, <i>Research Scholar : food processing.</i>                     | 25  |
| Y. S. Shah, <i>Research Scholar : fat-soluble-vitamins.</i>                      | 25  |
| R. A. Kulharni, <i>Research Scholar : water soluble-vitamins.</i>                | 25  |
| B. K. Vaidya, <i>Officer-in-Charge.</i>  | } Bombay University Wool<br>Research-Scheme (fin-<br>anced by the I.C.A.R.) |
| B. M. Patel, <i>Senior Technical Assistant</i>                                   |   |
| T. K. Desai, <i>Technical Assistant</i>  |   |
| G. K. Wagle, <i>Technical Assistant.</i>   |   |
| G. P. Damohe, <i>Technical Assistant.</i>  |   |
|  | 11  |

#### Schools of Economics and Sociology

##### AGRICULTURAL ECONOMICS SECTION

|  |    |
|--|----|
| Prof. M. L. Dantwala, <i>Reader.</i>                                     | 27 |
| Dr. M. B. Desai, <i>Lecturer.</i>  | 27 |
| Dr. V. V. Sayanna, <i>Lecturer.</i>                                      | 27 |
| C.-H. Shah, <i>Investigator : Regional Survey of Gujarat, 1939-45.</i>   | 27 |
| R. G. Gupte, <i>Investigator : Regional Survey, Bombay-Deccan.</i>       | 27 |
| K. N. Naik, <i>Investigator : Co-operation.</i>                          | 27 |
| <i>Research Students</i>   |    |
| W. B. Donde : <i>rural labour.</i>                                       | 27 |
| G. S. Gouri : <i>rural economy.</i>                                      | 27 |
| Merh, S. C. : <i>marketing.</i>  | 27 |
| N. S. Pradhan : <i>international trade in agricultural raw materials</i> | 27 |
| M. V. Hate : <i>tenancy.</i>   | 27 |
| B. R. Umarji : <i>agricultural holdings.</i>                             | 27 |

### UNIVERSITY OF CALCUTTA

#### University College of Science and Technology

35, Ballygunge Circular Road, Calcutta. (Tel : Park 2796).

##### DEPARTMENT OF BOTANY

*Scheme financed by the Indian Council of Agricultural Research :*

"Breeding of Improved Types of Banana." :

Amal Kumar Chakravorti, M.Sc., *Assistant Cytogeneticist.*

*Imperial Chemical Industries Research Fellowship awarded by the National Institute of Sciences, India : "Plant Embryo Culture." :* 3  
 Jyotirmay Mitra, M.A., *Research Fellow.*

*Ghosh Research Scholars (Botany), Calcutta University : (a) "Cytogenetics of Jesminum" ; (b) "Cytogenetics of Morus" :* 9  
 Miss Mridula Datta, M.A., *Scholar.*

(c) "Cytotaxonomy of Artocarpus" : 9  
 Shyama Sankar Bhattacharjya, M.Sc., *Scholar.*  
 (All four above guided by Prof. D. C. Sarbadhikari, D.Sc.)

*Scheme financed by Bengal Millowners' Association : "Research on the diseases of long staple cotton of Bengal" :*  
 Miss Himani Datta, M.A., *Research Assistant.* 6  
 (Guided by S. N. Banerji, M.Sc.)

## LUCKNOW UNIVERSITY

Lucknow.

### Mango Necrosis Scheme, Indian Council of Agricultural Research

Dr. S. N. Das Gupta, M.Sc., Ph.D. (Lond.), D.Sc. (Lond.), D.I.C. 6  
*Officer-in-Charge, Mango Necrosis Scheme and Professor of Botany, Lucknow University (on leave) : plant pathology and mycology.*

Dr. G. S. Verma, M.Sc., Ph.D., F.B.S., *Officiating Officer-in-Charge, Mango Nectosis Scheme, and Reader in Botany, Lucknow University : plant pathology and mycology.* 6

S. N. Iyer, B.Sc. (Hons.), M.Sc., *Chemical Research Assistant, Mango Necrosis Scheme : plant chemistry, biochemistry and organic chemistry.* 5

M. Kamal, M.Sc., *Physiological Research Assistant, Mango Necrosis Scheme : physiology and plant pathology.* 3, 6

## AGRA UNIVERSITY

### Agra College, Agra

*Schemes of Investigations on 'Cereal Rusts' and Testing Rust-Resistant Barleys.*

Dr. K. C. Mehta, M.Sc., Ph.D., Sc.D. (Cantab.), F.N.I., *Principal, Agra College, Agra, and Officer-in-Charge (Honorary).* 6

V. C. Lele, M.Sc., *Assistant Mycologist.* 6

L. M. Joshi, M.Sc., *Research Assistant.* 6

K. L. Narasimham, M.Sc., *Research Assistant.* 6

## EAST PUNJAB UNIVERSITY

### East Punjab Veterinary College, Hissar

A. Aggarwala, B.Sc. (Hons.), M.R.C.V.S. (Majore), A.I.R.O., 14, 15, 16,  
*Principal.* 17, 18

## REPUBLIC OF INDIA

|  | Subject            |
|--|--------------------|
| Balbir Singh, M.Sc., M.R.C.V.S., <i>Professor of Pathology</i> , | 16, 19, 21, 22, 23 |
| Jagnandan Singh, L.V.P., <i>Professor of Surgery</i> .           | 18                 |
| Chiranjit Lal Vohra, L.V.P., <i>Professor of Physiology</i> .    | 13, 22             |
| G. K. Sharma, G.P.V.C., <i>Professor of Animal Husbandry</i> .   | 14, 15, 18         |

### Khalsa College, Amritsar

#### Botany Department

|  |          |
|--|----------|
| Dr. P. N. Mehra, D.Sc., F.N.A.Sc., <i>Head</i> .                         | 3, 4, 11 |
| Jiwan Singh, M.Sc., <i>Professor of Botany</i> .                         | 20       |
| Ram Singh Ahuja, M.Sc., <i>Professor of Chemistry</i> .                  | 24       |
| R. S. Chopra, M.Sc., <i>Lecturer : bryology</i> .                        | 3        |
| Dr. K. S. Thind, M.Sc., Ph.D., <i>Lecturer</i> .                         | 6, 20    |
| S. K. Malhotra, M.Sc., <i>Demonstrator : pteridophyte and cytology</i> . | 3        |
| T. N. Khoshoo, M.Sc., <i>Research Assistant</i> .                        | 4        |
| B. R. Sharma, M.Sc., <i>Research Scholar-cum-Demonstrator</i> .          | 3        |
| P. N. Kachroo, M.Sc., <i>Research Scholar : liverworts cytology</i> .    | 3        |

### Government College, Hosiarpur

#### Zoology Department

|   |       |
|---|-------|
| Dr. Vishwa Nath, M.Sc., Ph.D. (Cantab.), <i>Principal, Government College, Hoshiarpur, and Head of the University Zoology Department : cytological studies ; cytology</i> . | 1, 13 |
| Guran Lal Arora, M.Sc., <i>University Lecturer in Zoology : entomostraca of Okha</i> .  | 13    |
| Sukh Dayal, M.Sc., <i>Lecturer in Zoology, Government College : nature of yolk nucleus in spider P. paykulli ; cytology</i> .   |       |
| N. K. Gupta, M.Sc., <i>Lecturer in Zoology, Government College : studies of some tremetodes of Indian vertebrates</i> .   | 21    |
| Romesh Chander, M.Sc., <i>University Demonstrator in Zoology : nature of osmiophilic granules in the eggs of leech ; cytology</i> .   |       |
| Bhupinder Nath Sud, M.Sc., <i>Curator, Zoology Museum : spermatogenesis of reptiles ; cytology</i> .  |       |
| N. P. Wadera, B.Sc. (Hons. School) : nematode sperm ; cytology.   |       |
| Om Prakash Grover, B.Sc. (Hons. School) : sperm of a Bombay prawn : cytology.   |       |
| R. P. Jolly, B.Sc. (Hons. School) : accessory organs of respiration in some fishes : cytology.  |       |

### Government Agricultural College

#### Ludhiana

|  |   |
|--|---|
| Dr. S. D. Nijhwan, B.Sc. (Hons.), M.Sc. (Pb.), M.S. (Kans. U.S.M.), Ph.D. : soil physics ; soil chemistry ; soil conservation : soil survey and fertilizery. | 2 |
| Dev Raj Chawla, M.Sc. (Agr.) : soil chemistry and plant nutrition.   | 3 |
| S. Inder Singh Cheema, B.Sc. (Hons.), M.Sc. (Agr.), <i>Plant Physiology : general botany and plant physiology</i> .  | 4 |
| Matu Ram Ahlawat, M.Sc. (Agr.), M.A. (Econ.) : cereals and pulses.   | 4 |



|  |         |
|--|---------|
|  | Subject |
| Matu Ram, M.Sc. (Agr.), M.A. (Econ.) : all the common crops grown in Northern India.   | 7       |
| S. Bishan Singh, M.Sc. (Agr) : agronomy (crop breeding).   |         |
| S. Harinder Singh Dinsa, B.Sc. (Agr.) High Honours (Idaho), M.Sc. (Agr.) : kausas horticulture.  | 9       |
| S. Gurcharan Singh Sohi, M.Sc. (Agr.) : insect pests of stored grain and other stored products, vegetable insect pests, and dung fauna.                  | 19      |
| Dr. Jaswant Singh, M.A. (Columbia), Ph.D. (Michigan), F.R.E.S., (London) : agricultural economics ; economic planning ; Agr. ; marketing, Agr. policies. | 27      |
| Kharak Singh Man, B.Sc. (Agr.).  | 4       |
| Asa Singh Thind, B.Sc. (Agr.) : eradication of weeds by chemical methods, especially of <i>carthmus oxyacantha</i> (Pohli) and cas-cute parasite.        |         |

## UNIVERSITY OF MYSORE

### Agricultural College

Hebbal, Bangalore. (Tel. : 3153).

|  |      |
|--|------|
| P. H. Rama Reddi, M.A., B.Sc. (Agr.), B.Sc. (Forestry) (Edin.), G.I.E., <i>Principal</i> .   | 1    |
| Dr. B. Dasappa, B.A., B.Agr., Ph.D., A.I.C., D.I.C., <i>Senior Lecturer in Agriculture</i> . | 2, 7 |
| H. C. Govindu, M.Sc., <i>Lecturer in Botany</i> .  | 3    |
| B. Sree Ramappa, B.E., <i>Lecturer in Civil Engineering</i> .                                | 28   |
| G. N. Srikantiah, G.M.V.C., <i>Lecturer in Animal Husbandry</i> .                            | 18   |
| B. A. Balachowdiah, M.A., <i>Lecturer in Agricultural Economics</i> .                        | 27   |
| Dr. S. V. Govindarajan, B.Sc. (Hons.), Ph.D., D.I.C., <i>Agricultural Chemist</i> .          | 24   |
| B. Krishnamurti, B.Sc., F.R.E.S., <i>Government Entomologist</i> .                           | 19   |
| S. V. Venkatarayan, B.A., <i>Plant Pathologist</i> .   | 6    |

## ANNAMALAI UNIVERSITY

### Department of Botany

|   |       |
|---|-------|
| Dr. T. C. N. Singh, M.Sc., D.Sc., F.B.S., <i>Professor and Head of the Department</i> .             | 2, 3  |
| K. Rangaswami, M.Sc., <i>Senior Lecturer</i> .  | 3, 4  |
| C. Srinivasan, B.Sc., <i>Lecturer</i> .   | 3, 12 |
| S. Venugopalan, B.Sc., <i>Demonstrator</i> .  | 3     |
| V. R. Rajagopalan, B.Sc., <i>Research Scholar</i> .   | 3     |
| A. T. Natarajan, B.Sc., <i>Research Scholar</i> .   | 3     |
| K. R. Venkatesan, B.Sc., <i>Research Scholar</i> .  | 3, 12 |
| M. K. Ramamurthy, M.A., <i>Senior Research Assistant, Indian Council of Agricultural Research</i> . | 4     |

### Department of Zoology

|  |    |
|--|----|
| Prof. R. V. Seshaiya, M.A. : entomology—embryology and cytology of <i>Chrysocoris purpurea</i> . | 19 |
|--|----|

**Department of Chemistry**

|  |    |
|--|----|
| S. Shanmuganathan, B.Sc. (Hons.) : mercuration of aromatic compounds               | 24 |
| V. Thiruvengkatachari, B.Sc. : mercuration of aromatic compounds.                  | 24 |
| N. Kailasam, B.Sc. (Hons.) : non-volatile acids of Indian fruits:                  | 24 |
| K. Kanapati, B.Sc. (Hons.) : essential oil from <i>Vetti Ver</i> .                 | 24 |
| (These four work under the guidance of Prof. K. I. Kuriyan, M.Sc., Ph.D. (Lond.).) |    |

**Department of Economics**

|  |    |
|--|----|
| T. S. Krishnamachari, M.A., M.Litt : agricultural economy of South Arcot District. | 27 |
| A. Subbiah, B.A. (Hons.) : cost of milk supply in Chidambaram Taluk.               | 27 |
| V. G. Ramakrishnaiyer, M.A. : agriculture and industry in South Arcot District.    | 27 |

**UTKAL UNIVERSITY**

Orissa

**Directorate of Public Instruction**

|  |       |
|--|-------|
| Dr. P. Misra, M.Sc. (Cal.), Ph.D. (Leeds), <i>Principal, Sambalpur College.</i>  | 3, 10 |
| G. B. Singh, B.A., M.R.C.V.S., <i>Director of Animal Husbandry and Veterinary Services, Orissa.</i>  | 1     |
| U. Patnaik, B.Sc. (Agr.), B.Ed.D. (Agr.), Sci. (Edn.), <i>Livestock Officer, Office of the Director of Animal Husbandry and Veterinary Services, Orissa.</i> | 18    |
| B. Rath, G.B.V.C., <i>Veterinary Investigation Officer : cattle.</i>   | 13    |
| G. S. Dehury, B.G.V.C., <i>Assistant Disease Investigation Officer : sheep and goats.</i>  | 13    |
| B. Das, G.B.V.C., <i>Assistant Disease Investigation Officer : poultry.</i>  | 13    |
| L. N. Das, G.M.V.C., <i>Research Assistant : sheep.</i>  | 14    |
| B. Saneal, G.B.V.C., <i>Research Assistant : goats.</i>  | 14    |
| K. M. Das, G.B.V.C., <i>Research Assistant.</i>  | 13    |
| B. Patnaik, G.B.V.C., <i>Research Assistant.</i>   | 16    |
| Dr. B. Samantarai, M.Sc., Ph.D., D.I.E., <i>Assistant Professor of Botany, Ravenshaw College, Cuttack.</i>   | 3     |
| Dr. N. K. Chatterjee, M.Sc., D.Phil., <i>Assistant Professor of Zoology, Ravenshaw College, Cuttack.</i>   | 3     |
| S. N. Patnaik, M.Sc., <i>Lecturer in Botany, Ravenshaw College, Cuttack, and Research Scholar, Utkal University.</i>   | 3     |
| B. Padhi, M.Sc., <i>Lecturer in Botany, Ravenshaw College, Cuttack.</i>  | 20    |
| G. Panigrahi, M.Sc., <i>Lecturer in Botany, Ravenshaw College, Cuttack.</i>  | 9     |

## MUSLIM UNIVERSITY

Aligarh.

## Chemistry Department

|   |   |
|---|---|
| Dr. M. O. Farooq, M.Sc., Ph.D. (Alig.), Ph.D. (Lond.), D.I.C.,<br><i>Reader in Chemistry.</i> | 5 |
|---|---|

## Zoology Department

|   |    |
|---|----|
| Dr. M. B. Mirza, B.Sc. (Hons.) (Bombay), D.Phil. at (Frankfort-am-Main), F.R.M.S. (Lond.), <i>Professor of Zoology, and Chairman, Department of Zoology : veterinary.</i> | 21 |
| Dr. M. A. Basirkhan, B.Sc. (Hons.), M.Sc., Ph.D. (Alig.), Ph.D. (Canada), <i>Lecturer in Zoology : veterinary.</i>  | 21 |
| Dr. M. A. H. Qadri, M.Sc., Ph.D. (Alig.), Ph.D. (Cantab), <i>Reader in Zoology : agriculture and veterinary.</i>  | 19 |
| Dr. S. M. Alam, M.Sc., Ph.D. (Alig.), <i>Lecturer in Zoology : agriculture and veterinary.</i>  | 19 |

## NAGPUR UNIVERSITY

## College of Agriculture

Nagpur. (Tel. : 378).

|   |              |
|---|--------------|
| Dr. R. P. Asthana, M.Sc., Ph.D. (Lond.), D.I.C. (Lond.), F.A.Sc., | 3, 6, 20, 22 |
| S. K. Misra, M.Sc.  | 2            |
| Dhannalal, M.Sc.  | 12           |
| S. T. Patil, B.Agr.   | 18           |
| Dr. R. S. Bhatt, M.Sc., Ph.D.                                     | 3, 20        |
| V. B. Rasal, B.Sc. (Agr.), B.Sc. (Agr. Engg.)                     | 28           |
| N. M. Joglekar, M.A. (Econ.), LL.B.                               | 27           |

## BENARES HINDU UNIVERSITY

(Tel. : Benares 77). 'Grams : Agriculture, Benares Hindu University.

## College of Agriculture

|   |           |
|---|-----------|
| K. Kumar, M.Sc.                             | 2, 3, 25  |
| Dr. R. S. Choudhry, D.Sc., Ph.D. (Cornell). | 2, 3      |
| Dr. K. N. Lal, D.Sc.                        | 2, 3      |
| Dr. P. B. Mathur, D.Sc.                     | 2, 5, 25  |
| Sant Singh, M.Sc.                           | 2, 5      |
| Uma Shanker Singh, M.Sc.                    | 2, 3, 7   |
| K. Das, M.Sc.                               | 4         |
| Dr. A. Lal, Ph.D. (Lond.).                  | 6, 20, 22 |
| M. S. Pavagi, M.Sc.                         | 6, 20, 22 |
| S. L. Kapoor, M.Sc.                         | 7         |



Jai Ram Singh, M.Sc.  
N. C. Ahuja, M.Sc.  
S. P. Mookerji, M.Sc.  
G. S. Lavania, M.A.

Subject  
9  
18  
19  
27

## PROVINCES

### MADRAS

#### AGRICULTURAL DEPARTMENT

(Tel. : 84089).

|  |       |
|--|-------|
| R. M. Sundaram, I.C.S., <i>Director of Agriculture.</i>  | 1     |
| B. M. Lakshmipathy, B.E., M.E., M.R.A.S.E., <i>Joint Director of Agriculture : agricultural implements and farm machinery ; lift irrigation from wells and application of power on Indian farms.</i>   | 28    |
| S. N. Venkataruman, B.A., B.Sc. (Agr.), <i>Provincial Marketing Officer, Madras.</i>   | 30    |
| A. H. Subramania Sarma :   | 1, 30 |
| V. T. Subbiah Mudaliar, L.Agr., <i>Deputy Director of Agriculture.</i>   | 1     |
| P. Krishna Rao, L.Agr., Assoc. I.A.R.I., <i>Millets Specialist.</i>  | 2, 3  |
| P. Abishekanathan Pillai, L.Agr., C.D.H. (Glas.), <i>Deputy Director of Agriculture, Coimbatore.</i>   | 1     |
| V. K. Subramania Mudaliar, L.Agr. (1st. Class), <i>Headquarters, Deputy Director of Agriculture, Madras.</i>   | 1     |
| C. R. Srinivasa Ayyangar, L.Agr., <i>Headquarters, Deputy Director of Agriculture.</i>   | 1     |
| A. Abdul Samad, <i>Superintendent, Agricultural Research Station, Tirurkuppam.</i>   | 1     |
| V. K. Appaji, <i>Superintendent, Sugarcane Research Station, Anakapalle.</i>   | 1     |
| M. Bhavani Shankar Rao, <i>Superintendent, Agricultural Research Station, Nileshtar.</i>   | 1     |
| C. H. Venkatasaravayya Chetty, <i>Superintendent, Agricultural Research Station, Samalkota.</i>  | 1     |
| M. P. Narasimha Rao, <i>Superintendent, Agricultural Research Station, Maruteru.</i>   | 1     |
| K. Ramaswami, <i>Superintendent, Agricultural Research Station, Aduthurai.</i>   | 1     |
| V. Thirumala Rao, B.Sc. (Agr.), <i>Lecturer in Entomology, Agricultural College, Bapatla : crop pests and their control ; pests of stored products and their control ; biological methods of insect control ; lac growing and bee keeping.</i> | 19    |
| M. R. Balakrishnan, B.A., B.Sc. (Agr.), <i>Lecturer in Chemistry, Agricultural College, Bapatla.</i>   | 2, 25 |

|   |  |
|---|--|
| M. Sanyasi Raju, M.Sc. (Wis.), <i>Gazetted Assistant in Chemistry, Agricultural College, Bapatla</i> : soil microbiology with special reference to <i>Rhizobium</i> and nitrogen fixation by legumes ; availability of green manure crops ; soil.   | Subject<br>2, 22                             |
| Dr. N. Krishnaswamy, B.Sc. (Mys.), Ph.D. (Kiel), <i>Cytogeneticist, Agricultural College, Coimbatore</i> : genetics ; plant breeding and cytogenetics ; karyo—systematic studies ; general botany and plant physiological anatomy.  | 3, 4   |
| C. Rajashekara Mudaliar, <i>Gazetted Assistant in Botany, Coimbatore.</i>   | 3, 4, 8                                      |
| P. Satyanarayana, <i>Gazetted Assistant Lecturer in Chemistry, Bapatla.</i>   | 2, 5, 24, 25                                 |
| L. Venkatratnam, <i>Plant Physiologist, Bapatla.</i>  | 3, 9   |
| C. Govinda Rao, <i>Lecturer in Mycology, Bapatla.</i>   | 20   |
| C. Balasubramaniam, <i>Agricultural Meteorologist, Coimbatore.</i>  | 26   |
| T. V. Rangaswami, <i>Assistant Cotton Specialist, Coimbatore.</i>   | 3, 4, 7                                      |
| S. Meyandi Pillay, <i>Assistant Cotton Specialist, Narasaraopet.</i>  | 3, 4, 7                                      |
| P. Abraham, <i>Assistant Cotton Specialist, Palur.</i>  | 3, 4, 7                                      |
| A. Kunhikoran Nambiar, <i>Assistant Millet Specialist, Coimbatore.</i>  | 3, 4, 7                                      |
| T. Gopalan Nair, <i>Assistant Fruit Specialist, Coonoor R.S..</i>   | 9  |
| N. S. Rajagopala Iyer, <i>Superintendent, Fruit Station, Koduratore.</i>  | 9  |
| M. Kandaswami, <i>Assistant Mycologist.</i>   | 20   |
| S. V. Parthasarathy, <i>Assistant Physiologist.</i>   | } Sugarcane Research<br>Station, Anakapalle. |
| C. Krishnamurthy, <i>Assistant Entomologist.</i>  |  |
| M. Sundaram, <i>Assistant Agril. Chemist.</i>   |  |
| S. Kanakaraj David, <i>Assistant Entomologist, Coimbatore.</i>  | 19   |
| S. Madhava Rao, <i>Fruit Specialist, Kodur.</i>   | 9  |
| T. Venkataramana Reddy, B.Sc. (Agr.), M.Sc., <i>Lecturer in Botany, Agricultural College, Bapatla</i> : grass anatomy with special reference to drought resistance : indigenous fodder grasses.   | 3, 4, 8                                      |
| T. Natarajan, B.A., B.Sc. (Agr.), <i>Junior Lecturer in Agriculture, Agricultural College, Bapatla</i> : agronomy and economics of field crops (sugarcane, paddy, plantains, etc.).   | 1  |
| B. Appala Naidu, M.A., M.Sc. (Mad.), <i>Gazetted Assistant to Lecturer in Botany, Agricultural College, Bapatla</i> : phenological observations on forests ; anatomy of all species of <i>Oryza</i> ; germination of paddy under different conditions ; physiology of root development ; anatomy of pulses. | 3  |
| C. S. Balasubramanyam, B.A., <i>Lecturer in Entomology, Agricultural College, Bapatla</i> : pests of crops and fruit trees and their control : bee-keeping.   | 19   |
| M. Kanti Raj, M.A., B.Sc., <i>Headquarters, Deputy Director of Agriculture, Madras.</i>   | 1  |
| V. Suryanarayana, M.A. (Econ.), B.A. (Bot. and Zool.), B.Sc. (Agr.), B.Ed., <i>Gazetted Assistant in Agriculture, Agricultural College, Bapatla</i> : agronomy of arable crops and agricultural economics.  | 1  |
| Rao Bahadur P. Venkataramiah, M.A., B.Sc. (Edin.), <i>Principal and Pulses Specialist, in Charge, Agricultural College, Coimbatore</i> : soil science ; soil surveys ; animal nutrition and protein metabolism ; mineral metabolism of dairy stock ; agricultural   | 2, 5, 25                                     |

|  |         |
|--|---------|
| industries, malting of <i>Sorghum</i> ; co-ordination of research at the Agricultural Research Institute, Coimbatore.  |         |
| N. Sankaranarayanan, B.E., A.M.I.E., <i>Estate Engineer (Civil), Agricultural College, Coimbatore</i> : in charge of teaching civil engineering to students.   | 28      |
| K. C. Naik, B.Agr., M.Sc., <i>Fruit Specialist, Kodur</i> : propagation of tropical and sub-tropical fruits ; rootstocks ; hybridisation in mango ; classification and nomenclature ; fruit nursery production ; blossom biology growth studies ; agronomy, root studies, technical supervision of all research work in fruits, spices, drug and medicinal plants, vegetables and plantation crops in the Presidency ; advisory and extension work in horticulture and pomology. | 9       |
| U. Narasinga Rao, B.Sc. (Agr.), A.F.S., Coonoor : fruits, spices, drugs, medicinal plants, plantation crops and vegetables of temperate and warm humid zones.  | 9       |
| Dr. G. S. Siddappa, M.A. (Madras), Ph.D. (Bristol), A.R.I.C., <i>Biochemist, Fruit Canning and Preservation Work (Madras) and Government Malt Factory, Coimbatore</i> : canning and preservation of fruits and vegetables ; manufacture of malted products.  | 25      |
| P. A. Venkateswaran Ayyar, B.A., B.Sc. (Agr.), <i>Superintendent, Central Farm, Coimbatore</i> .   | 1       |
| M. C. Cherian, B.A. (Madras), B.Sc. (Edin.), D.I.C. (Lond.), <i>Government Entomologist, Coimbatore</i> : mite ( <i>Acarina</i> ) : pests of crops and their control ; the coconut beetle ( <i>Oryctes rhinoceros</i> ) ; the sugarcane moth borers ( <i>Diatraea sticticraspis</i> , <i>D. venosata</i> and <i>T. Scripophagasp.</i> ) ; trypetid pests of crops.   | 19      |
| S. Ramachandran, L.Agr., <i>Entomologist, Coimbatore</i> :   | 19      |
| E. R. Gopala Menon, M.A., <i>Assistant Entomologist</i> : teaching entomology at the College ; research on pests of stored products, particularly <i>Lasioderma</i> and the cholam smut bug.   | 19      |
| K. P. Ananthanarayanan, M.A., <i>Gazetted Assistant in Entomology</i> : teaching entomology at the College ; research on paddy stem borer and parasites of coconut caterpillar ( <i>Nephantis serinopa</i> ).  | 19      |
| P. S. Narayanaswamy, B.Sc. (Agr.), <i>Assistant Entomologist, Coimbatore</i> : control of <i>Icerya purchasi</i> by the predator beetle ( <i>Rodolia cardinalis</i> ).   | 19      |
| D. Marudarajan, B.A., <i>Government Mycologist, Guntur</i> : tobacco diseases.   | 20      |
| T. S. Ramakrishnan, M.A., <i>Assistant Mycologist, Coimbatore</i> : cotton and orange diseases ; ergot.  | 20      |
| C. S. Krishnaswamy, B.A., B.Sc. (Agr.), <i>Assistant Mycologist, Coimbatore</i> : rice disease.  | 20      |
| K. Krishnan Menon, L.Agr., <i>Assistant Mycologist, Ootacamund</i> : ergot production.   | 20      |
| V. Gomathinayakam Pillai, B.Sc. (Agr.), <i>Assistant Botanist (Cardamom Specialist), Singampatti Group, Kalladakurichi P.O.</i>  | 4       |
| M. S. Subbiah, B.A., B.Sc. (Agr.), <i>Assistant Entomologist</i> .   | 19      |
| R. Balasubramanyan, B.A., B.Sc. (Agr.), <i>Cotton Specialist, Coimbatore</i> : directing cotton breeding programme in Madras Presidency ; evolution of (a) longer and finer-stapled cotton by hyd-   | 3, 4, 7 |



- bridisation ; (b) *G. hirsutum* types resistant to cotton stem weevil (*Pempheres affinis*), cotton jassids, blackarm (*Phytophthora malvacearum*) ; (c) high-yielding, early and long-stapled *arborescens* types suited to "Nadam" and "Salems" areas ; inheritance of genetical characters in cotton ; control schemes financed by the Indian Central Cotton Committee for the evolution of medium-stapled cotton for the Mungari areas, coloured medium-stapled types for the Cocanadas area, Cambodia types suited to the black-soils of ceded districts and long-staple cotton for cultivation under irrigation during summer.
- C. Jagannadha Rao, B.A., M.Sc., *Assistant Cotton Specialist*. 3, 4, 7
- S. M. Kalyanaraman, B.Sc. (Agr.), *Assistant Specialist, Coimbatore*. 3, 4
- G. Seshadri Ayyangar, M.A., M.Sc., *Assistant Cotton Specialist, Adoni*. 3, 4
- N. Kesava Ayyangar, M.A., M.Sc. (Lond.), *Assistant Cotton Specialist, Siruguppa* : in charge of breeding *Hirsutum* types suited to the black soils of ceded districts, both under irrigated and rainfed conditions. 3, 4
- T. K. Balaji Rao, L.Agr., *Paddy Specialist, Coimbatore* : improvement of rice by breeding and better agronomic practices ; fundamental research on rice genetics and mutations induced by chemicals. 4, 7
- M. B. V. Narasinga Rao, B.A., B.Sc. (Agr.), Assoc. I.A.R.I., *Assistant Paddy Specialist, Pattambi* : improvement of rice on the West Coast under heavy rainfall conditions ; cultivation of pineapple and cucumbers. 3, 4, 7
- K. B. Viswanadham, B.Sc. (Agr.), *Assistant Paddy Specialist, Coimbatore* : improvement of rice ; breeding strains resistant to *Piricularia oryzae* : general agronomy of rice. 3, 4, 7
- S. N. Chandrasekhara Ayyar, M.A., *Government Lecturer and Systematic Botanist* : teaching of agricultural botany and systematic work at the Madras Herbarium ; acclimatisation trials of plants, including forage plants. 3, 8
- Paul D. Karunakar, B.Sc. (Iowa), M.Sc. (Rutgers), A.R.I.C., *Agri-cultural Chemist*. 2, 5, 22, 24
- Dr. S. Kasinathan, B.A., Ph.D. (Lond.), *Assistant Agricultural Chemist* : teaching chemistry at the College ; biochemical research on soils and plants. 2, 25
- T. Rajagopalan, B.A., M.Sc., *Gazetted Assistant in Chemistry* : teaching chemistry at the College ; preservation of potato, cashew nut, etc., biochemical research on soils and plants. 2, 5, 24, 25
- T. R. Narayanan, B.A. (Cantab.), B.Sc. (Agr.), *Plant Physiologist* : plant nutrition, especially minor elements. 3, 4, 5
- G. K. Chidambaram, B.A. (Hons.), *Soil Survey Officer* : soil survey in relation to fruit growing. 2, 5, 24, 25
- C. M. John, B.A., *Oilseeds Specialist, Coimbatore* : 3, 4
- G. Venkatanarayana, B.Sc. (Agr.), *Superintendent, Agricultural Research Station, Nileskwar* : coconut. 1, 9
- C. R. Seshadri, B.A., B.Sc. (Agr.), *Assistant Oilseeds Specialist, Tindivanam* : groundnut storage. 1, 3, 4, 7

S. Sampath, M.A., *Cytogeneticist* : rice, millets and fruit crops with a view to obtaining high-yielding polyploids adapted to many environments.

M. A. Sankara Ayyar, B.A., B.Sc. (Agr.), *Assistant Millet Specialist* : hybrid vigour in *Pennisetum typhoides* and its utilisation for increased production of food.

1, 3, 4, 7

### ANIMAL HUSBANDRY DEPARTMENT

(Tel. : 84087).

K. S. Nayar, G.B.V.C., M.R.C.V.S., D.T.V.M., *Joint Director of Animal Husbandry, Madras.*

18

T. Murari, B.Sc., F.L.S., F.R.S.A., Dip. Rural Econ. (Oxon.), Dip-Agr. (Aberystwyth), *Livestock Development Officer, Madras.* (Tel. : 3563).

18

G. R. Viswanthan, G.M.V.S., P.G. (Mukteswar), *Superintendent : Serum Institute, Ranipet.*

1

S. Vaidyanatha Mudaliar, G.M.V.C., *Principal, Madras Veterinary College.* (Tel. : 3212.).

23

M. Anantaraman, M.A., M.Sc., *Helminthology Research Officer, Madras.*

21

R. Venkataraman, G.M.V.C., *Research Officer, Ranikhet Disease Vaccine Production Scheme, Madras Veterinary College, Madras.*

22

M. Ramakrishnan, G.M.V.C., *Veterinary Investigation Officer, Ranipet.*

16

T. Anantapadmanabhan, G.M.V.C., *Assistant Disease Investigation Officer, Ranipet : sheep and goats.*

16

A. R. Madhusudan, G.M.V.C., *Assistant Disease Investigation Officer, Ranipet : poultry.*

16

A. Krishnaswami, G.M.V.C., *Research Officer for the collection and collation of information on the indigenous drugs used in veterinary medicine from ancient literature and sanskrit manuscripts.*

—

K. T. Benjamin, *Superintendent, Livestock Research Station, Hosur Cattle Farm.*

14

T. Seshachalam Nayudu, *Superintendent, Dairy Farm, Waltair.*

17

C. Krishna Rao, G.M.V.C., B.V.Sc., *Superintendent, Cattle and Sheep Farm, Kurukuppi.*

14

H. Narahari Rao, *Poultry Development Officer, Madras.*

18

P. K. Krishnan Nambiar, *Sheep and Goats Development Officer, Hosur Cattle Farm.*

18

P. Ananatan Nair, *Superintendent, Livestock Research Station, Lam.*

14

M. C. Chellam, *Special Officer for Artificial Insemination, Madras.*

14

I. Muhammad Azizuddin, B.A., G.M.V.C., B.V.Sc., Ph.D. (Edin.), *Lecturer in Bacteriology, Madras Veterinary College.*

22

K. P. Chandrasekharan, G.M.V.C., B.V.Sc., *Lecturer in Pathology, Madras Veterinary College.*

16

### FOREST DEPARTMENT

(Tel. : 86441).

M. Kesavan Unni Nayar, B.A. (Hons.), I.F.S., *Chief Conservator of Forests, Madras. Senior Administrative Officer, Controlling Research Office.*

1, 2, 10, 11



|   |                  |
|---|------------------|
| M. Srinivasa Raghava Acharya, B.A., <i>Provincial Silviculturist, Ootacamund.</i>   | Subject<br>2, 10 |
| K. N. Raghavan Nair, B.A., B.Sc. (Edin.), <i>Assistant Provincial Silviculturist.</i>   | 10               |
| C. P. Bhimayya, B.A., <i>Assistant Conservator of Forests : attached to the Provincial Silviculturists Division, Ootacamund for soil conservation work, The Nilgiris.</i> | 2                |
| N. Thirumurti, M.A., I.F.S., <i>Forest Utilisation Officer, Madras.</i> (Tel. 86937).   | 11               |

## BOMBAY

### DEPARTMENT OF AGRICULTURE

|  |            |
|--|------------|
| B. N. Uppal, M.B.E., Ph.D. (Iowa), F. N.I., <i>Director of Agriculture, Bombay Province, Poona : administration and research.</i> (Tel. : 2088).   | 1, 6, 20   |
| D. A. Gadkari, B.E., A.M.Inst.C.E. (Lond.), M.I.E. (Ind.), B.S.E. (I.), <i>Joint Director of Agriculture (Engineering), Bombay Province, Poona : administration and research.</i> (Tel. 3335.).  | 1, 2, 28   |
| M. B. Ghatge, B.Agr., Ph.D. (Wales), F.S.S. (Lond.), <i>Deputy Director of Agriculture (Seed Multiplication and Extension), Poona : "Grow More Food" campaign, seeds.</i>  | 27         |
| R. D. Rege, B.A., M.Sc. (Bom.), Ph.D. (Lond.), Associate I.I.Sc., <i>Deputy Director of Agriculture (Research Education), Poona : sugarcane.</i> (Tel. : 2088).  | 2, 3, 25   |
| V. C. Pavate, B.Agr., <i>Deputy Director of Agriculture (Manures, Fertilizers and Rural Development), Poona. : administration.</i> (Tel. : 2666).  | 20         |
| R. S. Basrur, B.E., B.A.S. (I.), <i>Mechanical Cultivation Engineer to Government, Bombay Province, Poona : mechanical cultivation.</i> (Tel. : 3062).   | 28         |
| Hari Singh, M.B.E., B.Sc. (Edin.), <i>Soil Conservation Officer, Bombay Province, Poona : soil conservation.</i> (Tel. : 2151).  | 2          |
| P. J. Patel, B.Agr. (Bom.), M.Sc. (Iowa), B.A.S. (I.), <i>Agricultural Engineer to Government, Bombay Province, Poona : agricultural engineering.</i> (Tel. : 2128).   | 28         |
| L. S. S. Kumar, M.Sc. (Lond.), A.R.C.S., D.I.C., <i>Economic Botanist to Government, Bombay Province, Poona, and Principal, College of Agriculture, Poona : plant breeding, genetics, ecology of grasslands : agronomic technique, etc.</i> (Tel. : 2561). | 3, 4, 7, 8 |
| J. A. Daji, M.Agr., B.Sc., Ph.D. (Lond.), <i>Agricultural Chemist to Government, Bombay Province, Poona : fertilizers and soil fertility.</i> (Tel. : 2561).   | 2, 5       |
| P. N. Driver, M.A., <i>Professor of Agricultural Economics, College of Agriculture, Poona : farm cost studies.</i> (Tel. : 2561).  | 27         |
| S. R. Gandhi, M.Agr., <i>Horticulturist to Government, Bombay Province, Poona : horticulture.</i> (Tel. : 2561).   | 9, 30      |
| M. K. Patel, M.Sc., Ph.D. (Iowa), <i>Plant Pathologist to Government, Bombay Province, Poona : plant diseases including bacterial diseases.</i> (Tel. : 2561).   | 3, 20      |



|  | Subject    |
|--|------------|
| R. M. Chaudhari, B.Agr., <i>Professor of Agronomy, College of Agriculture, Poona : agronomy.</i> (Tel. : 2561).  | 1          |
| A. A. Vasavda, B.Agr., <i>Professor of Agricultural Engineering, Physics and Mathematics, College of Agriculture, Poona : agricultural engineering.</i> (Tel. : 2561).                     | 28         |
| S. Soloman, Ph.D. (Bom.), M.S. (California), <i>Assistant Professor of Botany, College of Agriculture, Poona : plant breeding and plant physiology.</i> (Tel. : 2561).                     | 3, 4       |
| M. N. Kamat, B.Agr., M.S. (Minnesota), <i>Assistant Professor of Mycology, College of Agriculture. Poona : plant diseases.</i> (Tel. 2561).  | 20         |
| B. G. Oka, B.Agr., <i>Professor of Animal Husbandry and Dairying, College of Agriculture, Poona : animal husbandry and dairying.</i>   | 14, 17, 18 |
| H. G. Pandya, Ph.D. (Bom.), <i>Assistant Professor of Agricultural Chemistry, College of Agriculture, Poona : general chemistry.</i> (Tel. : 2561).  | 24         |
| U. K. Kanitkar, B.A. (Hons.), M.Sc., <i>Professor of Plant Physiology, College of Agriculture, Poona : plant physiology.</i> (Tel. : 2561).  | 3          |
| P. M. Varma, M.Sc., <i>Virus Entomologist, Poona : virus entomology.</i> (Tel. : 2561).  | 19         |
| S. P. Capoor, M.Sc. (Agra), Ph.D. (Lond.), <i>Virus Pathologist, Poona : virus diseases of plants.</i> (Tel. : 2561).  | 6          |
| V. M. Chavan, B.Agr., <i>Deputy Director of Agriculture (Crop Research), B.P., Poona : cereals.</i> (Tel. : 2561).   | 3, 4       |
| R. S. Koshal, M.Sc., <i>Statistician, Department of Agriculture, Poona. agricultural statistics.</i> (Tel. : 2561).  | 29         |
| M. K. Shirole, B.Agr., B.A.S. (I.), <i>Land Utilization Survey Officer, Bombay Province, Poona : survey and classification of cultivable waste lands.</i>                                  | 2          |
| V. G. Sharma, M.Sc., <i>Statistical Officer under the Statistician, Department of Agriculture, Poona : agricultural statistics.</i>  | 29         |
| R. B. Gode, M.Sc., <i>Compost Development Officer (Urban), Poona : fertilizers.</i>  | 2, 25      |
| B. A. Nazareth, B.Agr., <i>Assistant Horticulturist to Government, B.P., Poona : horticulture.</i>   | 9          |
| I. A. Sayed, B.Agr., <i>Assistant Horticulturist, Scheme for Extension of Vegetable and Fruit Cultivation in Bombay Province, Poona : horticulture.</i>                                    | 9, 30      |
| K. I. Shaikh, B.Agr., <i>Potato Extension and Supply Officer, Poona : potato extension.</i>  | 1          |
| R. S. Dubhashi, <i>Superintendent, Vegetable Development Scheme, Poona : vegetable development.</i>  | 1          |
| N. R. Bhat, B.Agr., Ph.D. (Cambridge), <i>Statistical Officer, Office of the Deputy Director of Agriculture (Crop Research), B.P., Poona : agricultural statistics and plant genetics.</i> | 4, 29      |
| G. B. Deodikar, B.Sc. (Bom.), LL.B., Ph.D. (Bom.), <i>Cytologist under the Economic Botanist to Government, B.P., Poona : cytogenetics.</i>  | 4          |
| H. M. Desai, B.Agr., M.Sc. (Cornell, U.S.A.), <i>Principal, College of Agriculture, Dharwar : agronomy.</i>  | 1          |
| B. H. Patil, B.Agr., <i>Professor of Agronomy, College of Agriculture, Dharwar : agronomy.</i>   | 1          |

|  |                  |
|--|------------------|
| N. Narayana, M.Sc., Ph.D., <i>Professor of Agricultural Chemistry, College of Agriculture, Dharwar : biochemistry of foods.</i>  | Subject<br>2, 25 |
| K. C. Desai, B.Agr., Ph.D. (Cornell, U.S.A.), <i>Professor of Agricultural Botany, College of Agriculture, Dharwar : physiology of virus-affected plants.</i>                    | 3                |
| D. S. Rangrao, B.Sc. (Agr.), (I. class Hons.), B.A., <i>Professor of Mathematics and Statistics, College of Agriculture, Dharwar : crop cutting experimental survey.</i>         | 29               |
| S. A. Rajarao, M.Sc., <i>Professor of Agricultural Entomology, College of Agriculture, Dharwar : sugarcane pests.</i>  | 19               |
| R. S. Deshpande, M.Sc., Ph.D. (Lond.), <i>Professor of Plant Pathology, College of Agriculture, Dharwar : plant diseases.</i>  | 6, 20            |
| H. R. Arkeri, B.Sc. (Agr.), <i>Professor of Agronomy, College of Agriculture, Dharwar, on deputation for training abroad : agronomy.</i>   | 1                |
| S. K. Goni, B.Sc. (Agr.), <i>Professor of Animal Husbandry and Dairying, College of Agriculture, Dharwar, on deputation for training abroad : animal husbandry and dairying.</i> | 14, 17, 18       |
| V. P. Bhide, B.Sc. (Agr.), Ph.D. (Bom.), Ph.D. (Iowa), <i>Professor of Bacteriology College of Agriculture, Dharwar : general bacteriology.</i>                                  | 22               |
| S. R. Dhareshwar, B.Agr., <i>Professor of Horticulture, College of Agriculture, Dharwar : horticulture.</i>  | 9                |
| V. P. Gokhale, B.Agr., <i>Assistant Plant Pathologist, Wheat Rust Rust Scheme, Mahableshwar : wheat rust.</i>  | 6                |
| N. B. Patwardhan, B.Agr., <i>Officer I/c Agricultural Research Station, Padegaon : sugarcane.</i>  | 1                |
| M. M. Kibe, M.A., B.Sc., <i>Biochemist I/c Biochemical Section of the Scheme for Research and Extension Work on Rice in Bombay Province, Karjat : rice.</i>                      | 2, 5             |
| G. B. Patel, M.Agr., M.Sc. (California), <i>Cotton Botanist, Bombay Province, Surat : cotton.</i>  | 4                |
| D. S. Sheth, M.Sc. (U.S.A.), <i>Cotton Breeder, North Gujarat, Viramgam : Cotton.</i>  | 4                |
| B. J. Thakar, B.Agr., <i>Cotton Breeder, Broach : cotton.</i>  | 4                |
| S. G. Kelkar, B.Agr., <i>Cotton Breeder, S.M.C., Dharwar : cotton.</i>   | 4                |
| T. R. Khadilkar, B.Agr., M.Sc., <i>Cotton Breeder, Khandesh, Jalgaon: cotton.</i>  | 4                |
| J. K. Basu, M.Sc. (Cali.), Ph.D. (Lond.), <i>Soil Physicist to Government, B.P., Sholapur : soil science, soil survey, dry farming and soil conservation.</i>                    | 2                |
| L. Shrinivas, B.Sc. (Agr.), <i>Supervisor, Contour Strip Cropping Scheme, Sholapur : contour strip cropping.</i>   | 2                |
| M. A. S. Iyengar, B.Agr., <i>Land Improvement Investigator, Sholapur: erosion studies : soil conservation.</i>   | 2                |
| S. S. Sirur, <i>Soil Survey Officer, Scheme for the Survey of Lift Irrigation Projects in Bombay Province : soil survey.</i>   | 2                |
| V. D. Tagare, B.Sc., B.Agr., <i>Alkali Soil Investigator, Sholapur : reclamation of alkali soils.</i>  | 2                |
| D. H. Gokhale, M.Agr., B.Sc., <i>Principal, Soil Conservation Training Institute, and Superintendent, Agricultural School, Sholapur : dry farming and soil conservation.</i>     | 2                |

## REPUBLIC OF INDIA

|   | Subject |
|---|---------|
| S. V. Rama Rao, B.E., A.M.I.E. (Ind.), <i>Divisional Soil Conservation Officer, S.D., Bijapur</i> : soil conservation.      | 2       |
| G. V. Patel, B.E., B.A.S. (I.), <i>Divisional Soil Conservation Officer, N.D., Surat</i> : soil conservation.               | 2       |
| S. S. Maralihalli, B.Agr., <i>Plant Breeder and Officer I/c Crop Breeding Station, Bijapur</i> : plant breeding.            | 4       |
| P. S. Pandya, B.Agr., <i>Plant Breeder and Officer I/c Cereal Breeding Station, Niphad</i> : cereal breeding.               | 4       |
| M. S. Pandya, M.Agr., <i>Plant Breeder and Officer I/c Agricultural Research Station, Bhuwa</i> : plant breeding.           | 4       |
| G. T. Babriwala, B.Sc. (Agr.) (Hons.), <i>Plant Breeder and Officer I/c Rice Breeding Station, Dharwar</i> : rice breeding. | 4       |

### ANIMAL HUSBANDRY DEPARTMENT

|  |    |
|--|----|
| L. Sahai, M.Sc., M.R.C.V.S., <i>Director of Animal Husbandry and Veterinary Science, Bombay Province, Poona.</i> | 1  |
| S. R. Chadha, B.Sc., M.R.C.V.S., <i>Principal, Bombay Veterinary College, Parel, Bombay.</i>                     | 1  |
| R. N. Naik, G.B.V.C., <i>Bacteriologist, Bombay Veterinary College, Parel, Bombay.</i>                           | 18 |
| K. R. S. Aiyer, G.B.V.C., <i>Assistant Professor, Bombay Veterinary College, Parel, Bombay.</i>                  | 18 |
| S. G. Dixit, G.B.V.C., <i>Assistant Disease Investigation Officer (Poultry), Poona.</i>                          | 18 |
| S. P. Deshpande, G.B.V.C., <i>Disease Investigation Officer, Bombay Province, Poona.</i>                         | 18 |
| S. L. Manjrekar, G.B.V.C., <i>Assistant Disease Investigation Officer (Sheep and Goats), Poona.</i>              | 18 |
| S. Ram Mohan Rao, M.Sc., D.Sc., <i>Parasitologist, Civil Veterinary Department, Bombay.</i>                      | 18 |
| D. B. Khole, B.Agr., Associ. I.D.I., <i>Livestock Expert to Government, Bombay Province, Poona.</i>              | 1  |
| B. B. Jamaspijina, B.Agr., <i>Poultry Development Officer, Poona.</i>  | 1  |
| S. S. Khot, B.Agr., <i>Officer I/c Sheep Breeding, Poona.</i>  | 1  |
| G. S. Godbole, B.Agr., <i>Dairy Development Officer, Poona.</i>  | 1  |

### WEST BENGAL

#### DIRECTORATE OF AGRICULTURE, ANIMAL HUSBANDRY AND FISHERIES

Writers' Buildings, Calcutta.

##### Agriculture Branch

|   |                         |
|---|-------------------------|
| K. K. Ghosh, I.A.S., <i>Director of Agriculture. (Tel. : Writers' Buildings Extn. 241.)</i>   | 1                       |
| E. A. R. Banerjee, M.Sc. (Cal.), Dip.Agr. (Cantab.), <i>Assistant Director of Agriculture. (Tel. : Writers' Buildings—Extn. 245.)</i>                 | 1, 2, 3, 4, 7, 8, 9, 12 |
| L. C. Sikka, Ph.D. (Glas.), B.Sc., Assoc. I.D.I., <i>Milk Commissioner-cum-Administrator, Haringhata Farm. (Tel. : Writers' Buildings—Extn. 244.)</i> | 1, 13, 14, 15, 17, 18   |



|   | Subject       |
|---|---------------|
| S. C. Roy, B.A., B.Sc. (Agr.) (Wales), <i>Deputy Director of Agriculture, Eastern Range.</i> (Tel. : Anderson House—Extn. 28.)  | 1, 7, 12, 27  |
| S. K. Dey, M.A., B.Sc. (Agr.) (Wales), <i>Deputy Director of Agriculture, Western Range.</i>                                    | 1, 7, 12, 27  |
| S. P. Bose, B.Sc. (Agr.) (Wales), <i>Deputy Director of Agriculture, Northern Range.</i>  | 1, 7, 12, 27  |
| N. C. Roy, M.Sc., Dip.Agr. (Edin.), <i>Deputy Director of Agricultural Marketing.</i> (Tel. : Writers' Buildings—Extn. 254.)    | 1, 15, 18     |
| P. K. Dey, M.Sc., Ph.D. (Lond.), <i>Agricultural Chemist.</i>   | 2, 22, 24, 25 |
| P. J. Gregory, M.A., Ph.D. (Lond.), <i>Special Officer, Crop Research.</i> (Tel. : Writers' Building—Extn. 253.)                | 3, 4, 7       |
| H. C. Chowdhury, M.A., Ph.D. (Lond.), Ph.D. (Edin.), <i>Special Officer, : potatoes.</i> (Tel. : Writers' Buildings—Extn.—370). | 3, 4, 6, 7    |
| B. N. Banerjee, B.E., <i>Agricultural Engineer.</i> (Tel. : Writers' Buildings—Extn. 252.)                                      | 28            |
| K. C. Bhan, B.Sc. (Punjab), M.Sc. (Nanking), <i>Assistant Horticulturist.</i>   | 4, 9          |
| S. Chatterjee, M.Sc., Ph.D. (Lond.), <i>Assistant Mycologist.</i>   | 3, 6, 20, 22  |
| S. Banerjee, M.Sc., Ph.D. (Lond.), <i>Entomologist.</i>   | 3, 6, 19, 23  |
| R. K. Dey, M.Sc., Assoc. I.A.R.I., <i>Entomologist, Paddy Pest Scheme</i>   | 3, 6, 19, 23  |
| D. Bose, M.Sc., <i>Statistician.</i> (Tel. : Writers' Buildings—Extn. 248.)   | 29            |
| M. N. Basak, M.Sc., <i>Provincial Biochemist.</i> (Tel. : Writers' Buildings—Extn. 249.)  | 2, 24, 25     |
| S. Digar, M.Sc., Dip. Agr. (Cantab.), <i>Assistant Agricultural Chemist.</i>  | 2, 24         |

## DIRECTORATE OF BOTANICAL AND PUBLIC GARDENS

Calcutta (Tel. Howrah 909.)

Dr. K. Biswas, M.A., D.Sc. (Edin.), F.R.S.E., *Superintendent, Royal Botanic Garden* : algae ; systematic botany taxonomy ; ecology and horticulture.

Dr. S. K. Mukherjee, M.Sc., Ph.D., *Curator of the Herbarium* : systematic botany and taxonomy.

## DIRECTORATE OF FORESTS

Writers' Buildings, Calcutta. (Tel. : Park 3600).

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N. Pal, B.Sc. (Cal.), B.A. (Oxon.), I.F.S., *Conservator of Forests, Development Circle, Head of the Research Branch.* (Tel. : South 1037.)

K. N. Chaudhuri, B.Sc., Hons. (Cal.), A.I.F.C., W.B.S.F.S., *Divisional Forest Officer, Utilisation Division, Head of the Forest Utilisation Section, 35, Gopalnagore Road, Alipore, Calcutta, (Office Tel. : South 341).*

S. S. Mondal, M.Sc. (Cal.), A.I.F.C., W.B.S.F.S., *Divisional Forest Officer, Silvicultural Division, Head of the Silvicultural Section.*

D. C. Chaudhuri, B.A., D.D.R., *Assistant Forest Officer, Divisional Forest Officer, Working Plan Division, Head of the Working Plans Division.*

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- Writers' Buildings, Calcutta.
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- S. P. Basu, M.Sc., *Superintendent of Fisheries* : fish production and development ; sewage irrigated fisheries. (Tel. Extn. 237.)
- N. K. Chowdhury, M.Sc. (Dac.), M.S. (British Columbia), *Superintendent of Fisheries* : preservation and processing of fish and utilization of fish by-products : utilization of shark skin, fin and flesh. (Tel. : Park 2904).
- J. C. Sen Gupta, M.Sc. (Dac.), *Superintendent of Fisheries* : fish production and development : limiting factors for nursery and stocking tanks for proper growth of carp.
- A. N. Bhattacharji, B.Sc., B.T., *District Fishery Officer* : fish production and development ; reclamation of defective pond bottom.
- S. M. Banerjee, B.Sc., *District Fishery Officer* : utilisation of shark liver : the study of relation between the different species of shark available in West Bengal Coast, and the vitamines and liver contents of the same.
- P. Mazumder, B.Sc., *Fishery Overseer* : fish production and development : the study of the limiting factors responsible for fish growth in nursery, rearing and stocking tanks.
- P. Mukherji, B.Sc., *Fishery Overseer* : fish production and development : destruction of submerged vegetation in pond fisheries by micro doses of chemicals, non-poisonous to fish.
- Protap Mukherji, *Fishery Overseer* : spawn transport ; control of spawn mortality during transport. (Tel. : Park 2904.)
- Sujit Chakrabarti, *Fishery Overseer* : fish mortality ; to investigate into the reasons of sudden mortality of fish in pond fisheries and remedial measures thereof.

## VETERINARY DIRECTORATE

- Writers' Buildings, Calcutta.
- K. C. Mukherjee, M.Sc., M.R.C.V.S., *Assistant Director of Veterinary Service, West Bengal, 8 Lyons Range, Calcutta.* 15
- Major J. M. Lahiri, M.R.C.V.S., *Principal, West Bengal Veterinary College, Belgachia, Calcutta.* 15
- M. B. Menon, *Deputy Director, West Bengal Veterinary Research Institute, Belgachia, Calcutta.* 16
- S. K. Bhaduri, B.Sc., G.B.V.C., *Disease Investigation Officer, West Bengal and Assistant Disease Investigation Officer (Poultry), Bengal Veterinary College, Belgachia, Calcutta.* 15
- S. C. Roy, B.Sc., G.B.V.C., *Assistant Disease Investigation Officer (Helminth), Bengal Veterinary College, Belgachia, Calcutta.*
- M. S. Das, M.R.C.V.S., *Professor-cum-Research Officer, West Bengal Veterinary College, Belgachia, Calcutta.* 15
- S. N. Nandi, M.R.C.V.S., *Professor-cum-Research Officer, West Bengal Veterinary College, Belgachia, Calcutta.* 15

## DIRECTORATE OF CINCHONA

## Department of Industries and Commerce, Government of West Bengal

- Mungpoo P.O., Darjeeling. (Tel. : Takdah 60) and Old Hindusthan Buildings, Calcutta. (Tel. : West 1587.)
- Dr. M. Sen, D.Sc. (Calcutta), A.R.I.C. (Lond.), *Director, Cinchona, West Bengal.* 1, 3, 5, 9, 29
- G. H. Fothergill, *General Manager, Cinchona Plantations Branch.* 9, 11  
(Tel. : Takdah 60 (3).)
- Dr. M. Sen, D.Sc. (Calcutta), A.R.I.C. (Lond.), *Quinologist to the Government of West Bengal.* (Tel. : Takdah 60 (4).) 5, 28

## UNITED PROVINCES

## AGRICULTURE DEPARTMENT

- (Tel. : Lucknow 315).
- Dr. Sant Bahadur Singh, M.Sc., Ph.D. (Cantab.), *Director of Agriculture, U.P., Lucknow.* 1
- John A. Manawwar, M.A., B.Sc. (Edin.), M.S.A. (Texas), *Joint Director of Agriculture, United Provinces, Lucknow.* (Tel. : 690). 1
- Vacant., *Pathologist to Government, U.P., Kanpur* : potato ; sugarcane ; diseases of fruit trees ; bajra smut.
- Dr. B. K. Mukerji, Ph.D. (Lond.), D.Sc. (Alld.), *Director, Sugarcane Research, Shahjahanpur* : agronomic and genetical problems of sugarcane. (Tel. : 9). 2, 4, 24
- Vacant., *Agricultural Chemist to Government, U.P., Kanpur* : survey of soils in the U.P. ; alkaline soils and problems of manuring and plant nutrition.
- Dr. T. R. Mehta, B.Sc., Assoc. I.A.R.I., *Officiating Economic Botanist (Oilseeds), Kanpur* : linseed ; groundnut ; mustard sesamum ; safflower, jwar ; bajra ; sawan ; mandua ; maize ; sunn hemp ; arhar ; urd ; mung and cotton. 3, 4
- Dr. K. N. Lal, M.Sc. (Alld.), Ph.D. (Edin.), *Entomologist, Kanpur* : sugarcane ; mango pests ; pink boll in cotton. (Tel. : 3277). 6, 8, 19
- Dr. A. K. Mitra, M.Sc. (Luck.), Ph.D. (Cantab.), *Economic Botanist (Paddy), Kanpur* : agronomy and genetics of rice, barley and gram. 3, 4
- Ram Surat Singh, L.Agr., B.Sc. (Horti.) (Reading), *Deputy Director Horticulture, Lucknow* : hill and plain fruits. (Tel. 504). 9
- Dr. Radha Raman Agarwal, M.Sc., Ph.D. (Alld.), *Assistant Agricultural Chemist, Agricultural College, Kanpur.* 2, 23, 24
- P. S. Gupta, M.Sc. (Luck.), M.Sc. (Lond.), *Assistant Paddy Specialist, Nagina (Bijnor)* : breeding paddy. 4
- Dr. B. N. Pramanik, M.Sc. (Luck.), Ph.D. (Lond.), *Research Assistant, Sugarcane Chemist, Shahjahanpur* : chemistry of sugarcane. 24
- Mohd. Anwar Ahmad Ansari, M.Sc., *Assistant Economic Botanist, Bulandshahr* : breeding of cotton. 3, 4
- Kunwar Kishan, M.A., *Statistician, Lucknow.* 29
- Dr. Bhola Nath Singh, D.Sc., M.Sc., F.N.I., F.N.A.S., F.A.S.C., *Crop Physiologist, Lucknow.* 3



|   | Subject |
|---|---------|
| D. N. Garg, B.Sc. (Agr.), M.Sc. (Bot.), <i>Junior Plant Protection Officer, Kanpur.</i>   | 6, 19   |
| Chunni Lal Mehrotra, M.Sc., <i>Soil Chemist, Kanpur</i> : soil survey scheme.   | 2, 24   |
| Vacant., <i>Research Assistant Soil Chemist, Hill Fruit Research Station, Chaubattia, Almora, U.P.</i> : survey of soils in the kumaun hills orchards ; problems of fruits and fruit soils. |         |
| Z. A. Siddiqi, M.Sc., <i>Research Assistant Entomologist, Chaubattia, Almora, U.P.</i> : hill fruit pests.  | 6, 19   |
| Sohan Lal Gupta, M.Sc., <i>Officiating Research Assistant, Mycologist, Chaubattia, Almora, U.P.</i> : hill fruits.  | 6 9     |
| Dr. Shanker Saran Saxena, M.Sc., Ph.D., (Lond.), <i>Officiating Cane Physiologist, Shahjahanpur</i> : physiology.   | 3       |
| B. D. Gupta, M.Sc., Assoc. I.A.R.I., <i>Cane Entomologist, Shahjahanpur.</i>  | 19      |
| Rama Rao Panje, M.A., M.Sc., Dip., <i>European languages, Cane Agronomist, Shahjahanpur.</i>  | 2       |
| Kirtikar, M.Sc. Assoc. I.A.R.I., <i>Cane Mycologist, Shahjahanpur.</i>  | 20      |
| N. K. Das, M.Sc., Assoc. I.A.R.I., <i>Soil Chemist, Central Sugarcane Research Station, Shahjahanpur.</i>   | 24      |
| S. Subramonia Iyer, M.B., F.S.S., <i>Statistician, Central Sugarcane Research Station, Shahjahanpur.</i>  | 29      |
| Gur Prasad Kapoor, B.Sc. (Agri.), M.Sc., <i>Cane Agronomist, Muzaffarnagar.</i>   | 2       |
| Dr. Bhola Nath Lal, M.Sc., Ph.D. (Lond.), <i>Deputy Director, Fertilizer and Manure, U.P., Lucknow</i> : town refuse composting.  | 25      |
| Lakshmi Prakash, M.Sc., <i>U.P. Town Compost Officer</i> : town refuse composting.  | 25      |
| Pearey Lal Chaturvedi, M.Sc., Assoc. I.A.R.I., <i>Research Assistant Entomologist, Kanpur</i> : pests of fruits and fruit trees in the plains of U.P.                                       | 19      |
| B. M. Dabral, <i>Assistant Maize Specialist, Maize Breeding Scheme, Kanpur.</i>   | 3, 4    |

#### ANIMAL HUSBANDRY RESEARCH WORKERS.

(Tel. : Lucknow 450.)

|  |                   |
|--|-------------------|
| R. L. Kaura, D.V.M., M.R.C.V.S., <i>Director of Animal Husbandry, United Provinces, Lucknow</i> : direction and re-organization of research.   | 1, 14             |
| B. N. S. Chowdhary, B.Sc., M.R.C.V.S., <i>Joint Director of Animal Husbandry, United Provinces, Lucknow</i> : direction, Animal Husbandry (Livestock and Poultry Farms), Animal production (Dairying), Immunology (Biological products). (Tel. 188.)   | 1, 14, 17, 18, 22 |
| Ram Narain Mohan, L.V.P., <i>Veterinary Investigation Officer, United Provinces, Mathura</i> : immunisation of cattle against Rinderpest, study of casual strains of Haemorrhagic Septicaemia and use of thick agar wash formolised vaccine, miscellaneous disease problems of domestic livestock. | 16, 21, 22        |
| K. Govinda Rau, B.A., G.M.V.C., <i>Officer in Charge, Biological Products Section, United Provinces, Lucknow</i> : manufacture and research on sera and vaccine.   | 22                |

|   |         |
|---|---------|
|   | Subject |
| R. B. Singh, M.Sc., Ph.D., <i>Animal Geneticist, United Provinces.</i>  | 14      |
| N. C. Das Gupta, B.Sc., <i>Research Officer, Bharari, District Jhansi : animal nutrition.</i>   | 15      |
| R. L. Pandey, <i>Poultry Development Officer, United Provinces, Lucknow : poultry breeding.</i>   | 14      |
| S. S. Bhatia, I.D.D., <i>Dairy Development Officer, United Provinces, Lucknow : dairy technology and dairy development.</i>   | 17      |
| H. C. Joshi, G.B.V.C., <i>Gowshala Development Officer, United Provinces, Lucknow : gowshalal development and improvement.</i>  | 14      |
| S. C. Seth, B.Sc., <i>Pharmacologist and Chemist : testing the indigenous drugs for their efficacy in veterinary treatment and manufacture of animal husbandry pharmaceuticals.</i>                                   | 25, 27  |
| P. G. Pande, M.Sc., M.R.C.V.S., <i>Principal, U.P. College of Veterinary Science and Animal Husbandry, Mathura : organization and guidance of veterinary education and research in United Provinces. (Tel. : 33.)</i> | 1       |
| C. V. G. Choudary, B.Sc., M.R.C.V.S., <i>Professor of Anatomy, U.P., College of Veterinary Science and Animal Husbandry, Mathura : animal anatomy.</i>  | 13      |
| Bawa Sarbendar Singh, M.R.C.V.S., <i>Professor of Animal Husbandry, U.P. College of Veterinary Science and Animal Husbandry, Mathura : animal husbandry.</i>  | 18      |
| S. M. H. Shah, B.Sc., M.R.C.V.S., <i>Professor of Materia Medica, U.P. College of Veterinary Science and Animal Husbandry, Mathura : Materia Medica and pharmacology.</i>   | —       |
| B. P. Pande, D.Sc., <i>Professor of Parasitology, U.P. College of Veterinary Science and Animal Husbandry, Mathura : helminthology.</i>   | 21      |
| R. N. Singh, M.Sc., Ph.D., <i>Farm Manager, District Demonstration Farm, Mathura : dairying.</i>  | 17      |
| M.R. Mahajan, M.R.C.V.S., <i>Professor of Physiology, U.P., Veterinary College, Mathura : physiology.</i>   | 13      |
| G. S. Thapar, M.Sc., Ph.D., <i>Reader, Lucknow University, Lucknow : helminthology.</i>   | 21      |
| James N. Warner, M.Sc., <i>Professor, Agricultural Institute, Allahabad : dairy technology.</i>   | 17      |
| H. K. Lall, B.Sc., M.R.C.V.S., <i>Deputy Director of Animal Husbandry, United Provinces, Maerut.</i>  |         |

## FOREST DEPARTMENT

(Tel. : Naini Tal 70).

|   |        |
|---|--------|
| R. N. Singh, I.F.S., <i>Chief Conservator of Forests.</i>   | 10, 11 |
| G. M. Hopkins, I.F.S., <i>Conservator of Forest, in charge Working Plans and Research Circle.</i> | 10     |
| N. N. Sen, I.F.S., <i>Conservator of Forest in charge Land Management Circle.</i>                 | 10, 11 |
| S. K. Seth, A.I.F.C., <i>Silviculturist.</i>  | 10, 11 |
| D. C. Pande, A.I.F.C., <i>Assistant Silviculturist.</i>   | 10, 11 |

# EAST PUNJAB

(Tel. : Simla 798).

## AGRICULTURE DEPARTMENT

|   |             |
|---|-------------|
| Sardar Lal Singh, B.Sc. (Hons.), M.Sc. (Calif.), <i>Director of Agriculture, East Punjab, Simla.</i>  | 1, 7, 9, 19 |
| Dr. Arjan Singh, B.Sc. (Agr.) (Pb.), Ph.D. (Aberystwyth), <i>Assistant to the Director of Agriculture, East Punjab, Dagshai Cantonment.</i>                 | 1, 7, 27    |
| B. S. Sawhney, M.A. (Cantab.), <i>Officer on Special Duty, Department of Agriculture, East Punjab, Simla.</i>   | 1, 4, 7     |
| S. Sarup Singh, M.Sc. (Texas), <i>Post-graduate Training at J.J.H. Institute, London, Officer-in-charge Well Sinking Operations, Dagshai Cantonment.</i>    | 1           |
| Hans Raj Saini, M.Sc. (Agr.) (Pb.), B.Sc. (Edin.), <i>Deputy Director of Agriculture, Hansi.</i>  | 1           |
| Dr. Swaran Singh Purewal, M.Sc. (Calif.), Ph.D. (Cornell), <i>Deputy Director of Agriculture, Gurdaspur.</i>  | 1           |
| S. Chanda Singh, L.Agr. (Hons.), A.I.D.I., <i>Deputy Director of Agriculture, Jullundur City.</i>   | 1           |
| Dr. Sawan Mal Sikka, B.Sc. (Agr.) (Pb.), Assoc. I.A.R.I., Ph.D. (Lond.), <i>Cereal Botanist, Jullundur City.</i>  | 4           |
| S. Kartar Singh Labana, M.Sc. (Agr.) (Punjab), <i>Assistant Botanist, Jullundur City : wheat.</i>   | 2           |
| Lakhshmi Singh Negi, M.Sc. (Agr.) (Pb.), <i>Assistant Botanist, Jullundur City : maize.</i>   | 4           |
| S. Harbans Singh, B.Sc. (Agr.) (Pb.), Assoc. I.A.R.I., <i>Sugarcane Botanist.</i>   | 4           |
| S. Avtar Singh, B.Sc. (Agr.) (Pb.), <i>Cotton Breeder, Hansi (District Hissar).</i>   | 4           |
| S. Ajaib Singh Aujla, B.Sc. (Agr.) (Pb.), M.Sc. (U.S.A.).   | 4           |
| Ram Ditta Mal, M.Sc. (Agr.), (Pb.), <i>Millet Botanist, Ferozepore Cantonment.</i>  | 4           |
| S. Bal Singh Bajwa, B.Sc. (Agr.) (Pb.), M.Sc. (Calif.), <i>Fruit Specialist, Jullundur City.</i>  | 9           |
| S. Bachittar Singh, Mahngar, M.Sc. (Agr.) (Idaho) (U.S.A.), <i>Assistant Horticulturist, Garden Colonies, Ludhiana.</i>                                     | 9           |
| Dr. Dalip Singh, M.Sc. (Pb.), Ph.D. (Cantab.), <i>Principal, Government Agricultural College, Ludhiana.</i>   | 2           |
| Lal Chand Dharmani, L.Agr., B.Sc. (Agr.) (Pb.), F.I.C.S., <i>Agricultural Chemist, Jullundur City.</i>  | 2           |
| Jiwan Dass Chopra, B.Sc. (Agr.) (Pb.), A.H.B.T.I., <i>Assistant Agricultural Chemist, Jullundur City.</i>   | 2           |
| S. Kishan Singh Bedi, M.Sc. (Agr.) (Pb.), <i>Assistant Plant Pathologist, Gram Wilt, Ferozepore Cantonment.</i>   | 6           |
| Dr. Mulk Rao Madhok, B.Sc. (Agr.) (Pb.), Ph.D. (Rutgres), <i>Provincial Biochemist, Ambala City : compost.</i>  | 22, 25      |
| S. Amir Singh Sidhu, B.Sc. (Agr.) (Pb.), B.Eng. (Sheffield), <i>Agricultural Engineer, well boring operations and tube well installations, Ambala City.</i> | 28          |



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|--|---------------|
| Lakhshmi Chander Suri, Diploma in Eng. (Mogholpura), <i>Agricultural Engineer (Implements), Ambala City.</i>         | Subject<br>28 |
| S Amrik Singh, B.Sc. (Agr.) (Pb.), <i>Assistant Entomologist, Plant Protection, Jullundur City.</i>                  | 19            |
| Pritam Lal Sharma, B.Sc. (Agr.) (Pb.), <i>Assistant Entomologist, Beekeeping, Katrain, District Kangra.</i>          | 19            |
| Asa Nand Kalra, M.Sc. (Agr.) (Pb.), <i>Assistant Sugarcane Entomologist, Jullundur City.</i>                         | 19            |
| S. Hardyal Singh, B.Sc. (Agr.) (Pb.), M.Sc. (Lous.) (U.S.A.), <i>Assistant Sugarcane Agronomist, Jullundur City.</i> | 12            |
| Puran Anand Adlaka, M.Sc. (Agr.) (Pb.), <i>Assistant Sugarcane Physiologist, Jullundur City.</i>                     | 3             |
| S. Sher Singh Mangat, M.Sc. (Agr.) (Pb.), <i>Assistant Sugarcane Chemist, Jullundur City.</i>                        | 5             |
| Hukam Chand, B.Sc. (Agr.) (Pb.), <i>Fodder Botanist, Sirsa, District Hissar : post-graduate training at I.C.A.R.</i> | 8             |

#### MARKETING OFFICERS JULLUNDUR CITY

|   |    |
|---|----|
| S. Pritam Singh Diol, M.Sc. (Agr.) (Mich.) (U.S.A.), <i>Marketing Officer, East Punjab.</i>   | 27 |
| S. Ajaib Singh, B.Sc. (Agr.) (Pb.), <i>Assistant Marketing Officer, Livestock. Post graduate course in economics for one year. (Has proceeded on leave abroad).</i> | 27 |
| S. Gurmel Singh, B.Sc. (Agr.) (Pb.), M.A. (Pb.), <i>Assistant Marketing Officer : development.</i>  | 27 |

#### CIVIL VETERINARY DEPARTMENT

(Tel. : Simla 422).

|  |            |
|--|------------|
| J. S. Garewal, M.R.C.V.S., I.V.S., <i>Director, Veterinary Services, East Punjab, Simla, Head of the Veterinary Organisation in East Punjab.</i> | 1, 18      |
| Major A. C. Aggarwala, B.Sc. (Hons.), M.R.C.V.S., A.I.R.O., <i>Principal and Professor of Medicine, East Punjab Veterinary College, Hissar.</i>  | 1          |
| B. N. Handa, B.Sc., M.R.C.V.S., <i>Superintendent, Government Livestock Farm, Hissar. (Tel. : 92).</i>   | 14, 15, 17 |
| R. R. Ghulati, M.R.C.V.S., <i>Superintendent, Civil Veterinary Department, Ambala Division, Ambala. (Tel. : 61).</i>                             | 1, 18      |
| S. Balbir Singh, M.Sc., M.R.C.V.S., <i>Professor of Pathology and Bacteriology, East Punjab Veterinary College, Hissar.</i>                      | 16, 22     |
| S. Jagnandan Singh, L.V.P., <i>Professor of Surgery, East Punjab Veterinary College, Hissar.</i>   | 13         |
| S. Piara Singh, M.R.C.V.S., <i>Assistant Superintendent Research, Government Livestock Farm, Hissar.</i>   | 14, 15     |
| S. Dalip Singh, L.V.P., <i>Superintendent, Civil Veterinary Department, Jullundur Division, Ferozepur. (Tel. : 108.).</i>                        | 1, 18      |
| Sodhi Gambhir Singh, B.Sc. (Agr.), N.D.D., <i>Dairy Development Officer, East Punjab, Hissar.</i>  | 17         |

## REPUBLIC OF INDIA

|   | Subject |
|---|---------|
| Dr. Ganpati Parshad Sharma, <i>Animal Geneticist, Government Livestock Farm, Hissar.</i>                      | 15      |
| Charanjit Lal, L.V.P., <i>Professor of Physiology, East Punjab Veterinary College, Hissar.</i>                | 13, 25  |
| S. Gurmukh Singh, L.V.P., <i>Professor of Anatomy, East Punjab Veterinary College, Hissar.</i>                | 13      |
| Gopal Krishen Sharma, G.P.V.C., <i>Professor of Animal Husbandry, East Punjab Veterinary College, Hissar.</i> | 18      |
| S. Gopal Singh, L.V.P., <i>Veterinary Investigation Officer, East Punjab, Hissar.</i>                         | 16, 22  |
| Hari Krishen Sood, L.V.P., <i>Assistant Dairy Development Officer, Jullundur Division, Ferozepur.</i>         | 17      |
| Dayal Saran, L.V.P., <i>Manager, Murrah Buffalo Farm, Government Livestock Farm, Hissar.</i>                  | 14      |
| S. Nahar Singh, L.V.P., <i>Poultry Officer, Government Poultry Farm, Gurdaspur.</i>                           | 14      |
| Karam Chand, L.V.P., <i>Assistant Disease Investigation Officer : poultry.</i>                                | 16, 22  |
| Tek Chand, L.V.P., <i>Professor of Parasitology, East Punjab Veterinary College, Hissar.</i>                  | 17      |
| S. Jagat Singh, L.V.P. : indigenous goat breeding.  | 14      |
| Bishnu Datt : indigenous sheep breeding.  | 14      |

### PUBLIC WORKS DEPARTMENT, IRRIGATION BRANCH

|   |   |
|---|---|
| M. L. Mehta, B.Sc., L.Agr., <i>Director, Land Reclamation East Punjab.</i>  | 1 |
| Dr. C. L. Dhawan, M.Sc., Ph.D., <i>Assistant Research Officer : research on soil mechanics and movement of moisture in soil profiles and effect of land reclamation on soils.</i> | 2 |
| B. B. Lal Bhatnagar, M.Sc., <i>Assistant Research Officer : effect of land reclamation on constituents and other soil characteristics.</i>  | 2 |

### FORESTRY

|   |   |
|---|---|
| D. D. Saigal, I.F.S., <i>Deputy Conservator of Forests, Talland, Simla. (Tel. : 541).</i> | 1 |
|---|---|

## BIHAR

### DEPARTMENT OF AGRICULTURE

|  |       |
|--|-------|
| Dr. J. S. Patel, M.Sc. (Cornell), Ph.D. (Edin.), F.A.S.C., <i>Director of Agriculture : administration of department and organisation of research.</i> | 1     |
| B. P. Akhauri, B.Sc. (Agr.) (Wales), <i>Deputy Director of Agriculture, Chota Nagpur Range, Bihar : farm crops.</i>                                    | 1     |
| P. C. Ghosh, B.Sc. (Hons.), Patna, <i>Deputy Director of Agriculture, Patna Range, Patna : farm crops.</i>   | 7     |
| B. N. Sinha, B.Sc. (Cantab.), <i>Senior Marketing Officer, Kanke : farm crops and livestock.</i>   | 7, 18 |
| Dr. S. Anwarullah, <i>Principal, Bihar Agricultural College, Sabour, Bhagalpur. : soils ; fertilizers ; plant nutrition.</i>                           | 2     |

|   |                          |
|---|--------------------------|
|   | Subject                  |
| Syed Abdul Rufay, M.Sc., <i>Sugarcane Pathologist</i> .   | 6                        |
| Dr. H. N. Mukherjee, M.Sc., Ph.D. : soils ; fertilizers ; plant nutrition.  | 2                        |
| M. P. Singh, M.Sc. : economic botany.   | 3                        |
| A. B. Lal, M.Sc. : economic botany.   | 3, 4                     |
| B. K. Sinha, M.Sc. (N.Z.), <i>Entomologist</i> .  | 19                       |
| S. L. Sharma, M.Sc., <i>Sugarcane Mycologist</i> .  | 20                       |
| K. B. Rau, M.Sc. (N.Z.), <i>Fruit Production Officer</i> .  | 9                        |
| S. K. Mukherjee, M.Sc. (U.S.A.).  | } Assistant Directors. 1 |
| G. S. Sinha, M.Sc.  |                          |
| S. A. Malik, Dip. in Agr. (C.A.C., N.Z.)  |                          |
| S. A. H. Rizavi, B.Sc.  |                          |
| D. N. Jha, B.Sc. (Hons.)  |                          |
| Rajindra Prasad, B.Sc.  |                          |
| T. P. Singh, M.Sc.  |                          |
| V. N. Singh, B.Sc. (Agr.)   |                          |
| S. S. Jayswal, B.Sc. (Agr.)   |                          |
| R. N. Pandey, L.Agr.  |                          |
| P. C. Verma, B.Sc. (Agr.).  |                          |
| A. D. Chhugani, B.Sc., <i>Agricultural Engineer, Patna</i> : irrigation from tube-wells.  | 28                       |
| Dr. R. H. Richaria, M.Sc., Ph.D. (Cantab.), <i>Economic Botanist, Sabour, Bhagalpur</i> : improved food, fodder and oil seed crops. | 7, 8                     |
| Dr. S. Anwar Ullah, Ph.D. (Lond.), A.G.C., <i>Agricultural Chemist, Sabour, Bhagalpur</i> : agricultural chemistry.                 | 24                       |
| K. L. Khanna, B.Sc. (Agr.), <i>Sugarcane Specialist, Bihar Pusa, Darbhanga</i> .  | 7                        |
| R. S. Roy, M.Sc. (Calif.), <i>Physiological Botanist, Sabour, Bhagalpur</i> : periodicity of bearing on mangoes.                    | 3, 9                     |
| S. B. Das Agarwala, B.Sc. (Agr.), Ph.D. (Lond.), <i>Sugarcane Entomologist, Bihar Pusa, Darbhanga</i> .                             | 19                       |
| G. S. Pandey, Dip. C.A.C., N.Z.   | } Agronomists. 12        |
| K. D. Sharma, M.Sc., Assoc. I.A.R.I.  |                          |
| M. B. Lal, M.Sc.  |                          |
| K. S. Bandopadhyay, M.Sc., <i>Statistician</i> .  | 29                       |
| A. S. Chakravarty, M.Sc., Ph.D., <i>Gur Chemist</i> .   | 5                        |
| Sheonath Prasad, M.Sc., <i>Soil Biochemist</i> .  | 5, 25                    |
| S. C. Sen, M.Sc., <i>Sugarcane Chemist</i> .  | 5                        |
| A. K. Sarkar, B.Sc., <i>Assistant Marketing Officer</i> .   | 11                       |
| Prof. T. G. Jacob, <i>Agr. Engineering</i> .  | 28                       |
| Prof. P. R. H. Acharjee, M.A., <i>Agl. Economics</i> .  | 27                       |
| Prof. M. H. Jani, B.Sc. (Edin).   | 1, 7                     |
| B. K. Dutt., M.Sc., <i>Pathologist</i> .  | 6                        |

## ANIMAL HUSBANDRY DEPARTMENT

|  |                   |
|--|-------------------|
| S. K. Sen, B.Sc. (Cal.), M.R.C.V.S., <i>Animal Husbandry Officer, Bihar, Patna</i> : administration and organisation of research and development schemes in animal husbandry and dairying. | 1, 14, 15, 17, 18 |
|--|-------------------|



|  |         |
|--|---------|
|  | Subject |
| H. K. Roy, G.B.V.C., <i>Technical Assistant, Patna</i> : assisting in organisation and administration of research and development schemes. | 8, 18   |
| B. Prasad, C.D.D., C.C.A. (Wales), <i>Goshala Development Officer, Bihar, Patna.</i>   | 14      |
| B. M. Prasad, G.B.V.C., <i>Poultry Development Officer, Bihar, Patna.</i>  | 18      |
| R. P. Singh, G.B.V.C., Associate I.D.R.I., <i>Superintendent, Bachaur Cattle Breeding Farm, Pusa, Bihar.</i>                               | 17      |
| S. T. Ecka, B.Sc. (Agr.), <i>Superintendent, Haryana Cattle Breeding Farm, Dumraon, Bihar.</i>   | 17      |
| S. Singh, I.D.D., <i>Assistant Dairy Development Officer, Patna, Bihar.</i>  | 17      |
| J. Swami, I.D.D., <i>Dairy Surveyor, Patna, Bihar.</i>   | 17      |
| N. D. Singh, G.B.V.C., <i>Chief Instructor, Stockmen Training Centre, Darbhanga, Bihar.</i>  | 18      |

## ORISSA

### AGRICULTURAL DEPARTMENT

(Tel. : Cuttack 121. 'Grams : Diragric.)

|   |          |
|---|----------|
| R. P. Padhi, M.A., I.A.S., <i>Director of Agriculture and Food Production, Orissa.</i>  | 1        |
| Dr. H. K. Nandi, M.Sc. (Cal.), Ph.D. (Lond.), F.L.S., F.R.M.S., <i>Deputy Director of Agriculture, Orissa.</i> (Tel. : 265).                    | 1        |
| D. Misra, B.Agr. (Nag.), Dip. in Agr. (Cantab.), <i>Assistant Director of Agriculture, In Charge Eastern Range, Cuttack.</i>                    | 1, 12    |
| D. Behura, B.Sc. (Pat.), B.Sc. (Durham), <i>Assistant Director of Agriculture, In Charge Western Range, Sambalpur.</i>                          | 1        |
| P. D. Dixit, M.Sc. (Luck.), Assoc. I.A.R.I., <i>Assistant Director of Agriculture, Cuttack.</i>   | 1        |
| R. Behera, B.Sc. (Agr.), Dip. in Agr. (Edin.), <i>Assistant Director of Agriculture, Seed Multiplication Scheme.</i>                            | 1        |
| Brundaban Misra, B.Sc. (Utkal), B.Sc. (Hons.) (Wales), <i>Assistant Director of Agriculture, Cuttack.</i>                                       | 1, 27    |
| Dr. G. V. Chalam, M.Sc., Ph.D., <i>Assistant Director of Agriculture, Land Reclamation (Sukinda District, Cuttack).</i>                         | 1        |
| D. Mahapatra, B.Sc. (Agr.) (Allahabad), M.Sc. (Ohio), <i>Assistant Director of Agriculture (Personal Assistant to Director of Agriculture).</i> | 1, 2, 12 |
| Balabhadro Misra, B.Sc. (Agr.) (Nagpur), Assoc. I.A.R.I., M.Sc. (Lond.), <i>Economic Botanist.</i>  | 3, 4, 27 |
| N. R. Panigrahi, B.Sc., Assoc. I.A.R.I., <i>Economic Botanist.</i>  | 3, 4     |
| G. C. Sengupta, B.Sc. (Agr.), Assoc. I.A.R.I., <i>Entomologist (offg.).</i>   | 19       |
| Dr. U. N. Mohanty, M.Sc. (Cal.), Assoc. I.A.R.I., Ph.D. (Lond.), <i>Mycologist.</i>   | 6, 20    |
| S. M. Iyer, B.Sc. (Agr.), I.L.D., <i>Agricultural Chemist.</i>  | 5        |
| H. K. Mohanty, B.Sc. (Engineering) (Pat.), M.S. (Eng.) (U.S.A.), Assoc. M.A.S.C.E., M.A.S.A.E., <i>Agricultural Engineer.</i>                   | 28       |
| Jagannath Hota, B.Sc. (Agr.), Assoc. I.A.R.I., M.Sc. (Ohio), <i>Sugarcane Specialist.</i>   | 7        |

|   | Subject |
|---|---------|
| T. S. Sundaram, B.A., <i>Sugarcane Entomologist.</i>                                | 19      |
| B. Tripathi, M.Sc., <i>Coconut Research Officer, Sakshigopal, Puri.</i>             | 9       |
| U. N. Nanda, <i>Agricultural Engineer, Sukinda.</i>                                 | 28      |
| Madhab Patnaik, M.Sc., <i>Bio-Chemist, Cuttack.</i>                                 | 25      |
| S. N. Bhoi, B.Sc. (Agr.) (Allahabad), M.Sc. (California), <i>Horticulturalist.</i>  | 9       |
| Kulamoni Panaiik, <i>Fruit Development Officer, Cuttack.</i>                        | 9       |
| M. Patra, B.Sc. (Patna), D.I.II., F.T., <i>Fruit Technologist, Orissa, Cuttack.</i> | 5       |
| B. B. Mohanty, B.M.E., <i>Second Agricultural Engineer, Cuttack.</i>                | 28      |

## ANIMAL HUSBANDRY AND VETERINARY DEPARTMENT

(Tel. : Cuttack 41 and 230).

|  |    |
|--|----|
| G. B. Singh, B.A., M.R.C.V.S., <i>Director of Animal Husbandry and Veterinary Services; Orissa, Cuttack.</i> | 1  |
| U. Patnaik, B.Sc. (Agr.), B.Ed.D. (Agr.), Sci. (Edn.), <i>Livestock Officer, Cuttack.</i>                    | 18 |
| B. Rath, G.B.V.C., <i>Veterinary Investigation Officer, Cuttack : cattle.</i>                                | 13 |
| G. S. Dehury, G.B.V.C., <i>Assistant Disease Investigation Officer, Cuttack : sheep and goat.</i>            | 13 |
| B. Das, G.B.V.C., <i>Assistant Disease Investigation Officer, Cuttack : poultry.</i>                         | 13 |
| L. N. Das, G.M.V.C., <i>Research Assistant : sheep.</i>  | 14 |
| B. Samal, G.B.V.C., <i>Research Assistant, Russelkonda : goats.</i>  | 14 |
| K. M. Das, G.B.V.C., <i>Research Assistant, Cuttack.</i>   | 13 |
| B. Patnaik, G.B.V.C., <i>Research Assistant, Cuttack.</i>  | 16 |

## CENTRAL PROVINCES AND BERAR

### DEPARTMENT OF AGRICULTURE

|  |    |
|--|----|
| P. D. Nair, M.A., L.Agr. (Hons.), Post Graduate Pusa, <i>Director of Agriculture.</i>  | 1  |
| R. C. Shrivastava, B.Sc. (Nag.), B.Sc. (Tech. Manchester), Dipl. R.T.S. (Glasgow), <i>Agricultural Chemist.</i>  | 2  |
| S. K. Mishra, M.Sc. (Agr.), <i>Agriculturist to Government, C.P. and Berar.</i>  | 18 |
| S. S. Pande, M.Sc., <i>Economic Botanist to Government, C.P. and Berar.</i>  | 4  |
| Dr. G. S. Bhatia, B.Sc. (Hons.) M.Sc., Ph.D. (Lond.), F.L.S., F.R.M.S., <i>Second Economic Botanist to Government, C.P. and Berar.</i>                   | 4  |
| Dr. R. P. Asthana, M.Sc., F.A.Sc., D.I.C., Ph.D. (Lond.), <i>Principal, College of Agriculture and Mycologist to Government, C.P. and Berar, Nagpur.</i> | 20 |
| Dr. R. L. Gupta, B.Agr., Ph.D., Assoc. I.A.R.I., <i>Entomologist to Government, C.P. and Berar, Nagpur.</i>  | 19 |
| R. B. Ekbote, M.Sc. (Agr.), Assoc. I.A.R.I., <i>Wheat Specialist, Wheat Research Scheme, Powerkhara (Hoshangabad).</i>                                   | 4  |

|  |         |
|--|---------|
|  | Subject |
| Dr. K. G. Joshi, M.Sc., Ph.D., <i>Compost Development Officer and Deputy Director of Agriculture, Southern Circle, Nagpur.</i> | 1, 25   |
| Dr. V. G. Vaidya, B.Agr., Ph.D., <i>Deputy Director of Agriculture, Northern Circle, Jubbulpore.</i>                           | 1       |
| V. D. Kalvit, L.Agr., <i>Deputy Director of Agriculture, Western Circle, Amraoti.</i>  | 1       |
| B. B. Dave, M.Sc. (Agr.), <i>Deputy Director of Agriculture, Eastern Circle, Raipur.</i>                                       | 1       |
| N. R. Ramaiyah, L.Agr. (Hon.), <i>Officer on Special Duty (G.M.F.), Nagpur.</i>  | 1       |
| B. S. Rao, L.Agr. (Hons.), <i>Deputy Director of Agriculture (H.Q.), Nagpur.</i>   | 1       |
| M. Pradyumnasingh, M.Sc., <i>Horticulturist to Government, C.P. and Berar, Nagpur.</i>   | 9       |
| H. P. Chitari, B.E., <i>Agricultural Engineer to Government, C.P. and Berar.</i>   | 28      |

## VETERINARY DEPARTMENT

|  |    |
|--|----|
| H. B. Shahi, M.Sc., M.R.C.V.S., D.T.V.M., <i>Director of Veterinary Services, Central Provinces and Berar.</i> | 16 |
| M. Y. Mangrulkar, M.Sc., M.R.C.V.S., D.T.V.M., <i>Principal, Veterinary College, Jubbulpore.</i>               | 16 |
| H. N. Chelva Iyengar, G.M.V.C., <i>Professor of Anatomy, Veterinary College, Jubbulpore.</i>                   | 16 |
| J. A. Idnani, G.B.V.C., <i>Officiating Deputy Director of Veterinary Services.</i>                             | 16 |
| P. S. Sundram Pillay, C.B.V.C., <i>Officating Deputy Director of Veterinary Services.</i>                      | 16 |
| S. L. Zargar, G.B.V.C., <i>Officating Assistant Director of Veterinary Services.</i>                           | 16 |
| M. W. Rahalkar, G.B.V.C., <i>Officiating Assistant Director of Veterinary Services.</i>                        | 16 |
| G. H. Khan, G.P.V.C., <i>Officiating Assistant Director of Veterinary Services.</i>                            | 16 |
| V. N. Sharma, G.B.V.C., <i>Officiating Assistant Director of Veterinary Services.</i>                          | 16 |
| G. R. Ramaswamy, G.M.V.C., <i>Officating Assistant Director of Veterinary Services.</i>                        | 16 |
| S. R. Nadgir, G.M.V.C., <i>Assistant Professor of Zootechny, Veterinary College, Jubbulpore.</i>               | 16 |
| R. P. Misra, G.B.V.C.,   | 16 |
| T. V. Kuppuswamy, G.M.V.C.   | 16 |
| M. Ram Mohan Rao, G.M.V.C.   | 16 |
| Y. M. Parnerkar, <i>Honorary Livestock Officer, Central Provinces and Berar.</i>                               | 12 |
| Abdul Hamid Khan, <i>Officiating Deputy Director of Veterinary Services In Charge Animal Husbandry.</i>        | 12 |
| T. V. Rama Iyer, <i>Officiating Deputy Director of Veterinary Services, In Charge Ghee Scheme.</i>             | 12 |



|   |               |
|---|---------------|
| D. P. Shrivastava, <i>Extra Assistant Director, Animal Husbandry Section, C.P. and Berar.</i> | Subject<br>12 |
| D. D. Shukla, <i>Officiating District Livestock Officer.</i>                                  | 12            |

### FOREST DEPARTMENT

|  |    |
|--|----|
| R. N. Datta, B.A. (Oxon), M.Sc. (All.), <i>Silviculturist.</i>   | 21 |
| Wali Mohd, <i>Forest Utilization Officer.</i>  | 22 |
| K. P. Sagreiya, B.A. (Oxon.), B.Sc. (Nag.), <i>Officer on Special Duty and Secretary, Forest Policy Committee, C.P. and Berar, Nagpur.</i> | —  |

## ASSAM

### AGRICULTURAL DEPARTMENT

|   |       |
|---|-------|
| L. K. Handique, B.Sc. (Agr.) (Edin.), <i>Director of Agriculture, Assam : general administration.</i> | 1, 7  |
| S. R. Baruah, B.Sc. (Agr.), M.Sc. (Agr. Bot.), Ph.D., <i>Economic Botanist, Assam.</i>                | 7     |
| P. M. Ganguli, <i>Assistant Economic Botanist.</i>  | 7     |
| B. N. Dowera, B.Sc. (Agr.), M.Sc. (Calif.), <i>Assistant Economic Botanist.</i>                       | 7     |
| L. N. Phukan, B.Sc., <i>Agricultural Chemist.</i>   | 2, 24 |
| Dr. S. K. Talapatra, B.Sc., Ph.D., <i>Physiological Chemist : cattle nutrition.</i>                   | 15    |
| S. C. Choudhury, B.Sc. (Agr.), <i>Mycologist.</i>   | 20    |
| G. N. Sarma, B.Sc., P.G., <i>Entomologist.</i>  | 19    |

### CIVIL VETERINARY DEPARTMENT

|  |    |
|--|----|
| A. K. Mitra, M.R.C.V.S., P.G. (Mukteswar), <i>Director of Veterinary Department, Assam : general administration.</i> | 1  |
| V. R. Gopalakrishnan, G.M.V.C., P.G. (Mukteswar), <i>Veterinary Investigation Officer, Assam : animal pathology.</i> | 16 |
| Bhobani Prasad Barkakati, <i>Assistant Investigation Officer : poultry diseases.</i>                                 | 13 |

### FOREST DEPARTMENT

|  |    |
|--|----|
| M. L. Saikia, B.Sc., A.I.F.C., <i>Botanical, Forest Officer and Silviculturist, Assam.</i> | 10 |
| G. C. Chaudhury, <i>Forest Utilisation Officer, Assam.</i>                                 | 11 |

## STATES

### HYDERABAD STATE GOVERNMENT

#### Direction and Control

|  |   |
|--|---|
| Rai Mohindra Bahadur, B.A. (Punjab), M.S. (Wisconsin, U.S.A.), <i>Director of Agriculture.</i> | 1 |
|--|---|

## REPUBLIC OF INDIA

Subject

- A. B. H. Khoorshid, B.A. (Bombay), M.S. (Wisconsin, U.S.A.), *Senior Deputy Director.* 1
- K. Venugopal, B.Sc. (Agr.) (Madras), *Personal Assistant to the Director of Agriculture.* 1

### PUBLICITY SECTION

- D. V. G. Krishnamurthy, B.Sc. (Madras), B.Agr. (Bombay), M.S. (Cornell), *Publicity Officer.* 1
- M. Venkateshwar Rao, B.Sc. (Agr.) (Bombay), *Assistant Publicity Officer.* 1
- Balkrishna Anant Chitnis, Certificate of specialisation in Commercial Art, *Artist Photographer.*

### STATISTICAL SECTION,

- M. Kamkolkar, B.Sc.Agr. (Nagpur), *Statistical Assistant.* 29

## AGRICULTURAL ENGINEERING

- S. P. Raju, B.Sc. (Engineering), A.M.I.E. (Benares), *Boring Superintendent.* 28
- Abdul Kader Aseer, B.A. (Madras), *Tractor Engineer.* 28
- Syed Md. Jafar Razvi, Diplom Landwirt (Berlin), *Machinery Superintendent.* 28

## AGRICULTURAL PROPAGANDA AND EXTENSION

### I. Godavari Division

- C. A. Gideon, B.Agr. (Bombay), A.I.A.R.I. (Delhi), *In Charge, Deputy Director.* 1
- Burhanuddin Hussain, B.Agr. (Bombay), *Assistant Director, Aurangabad.* 1
- B. A. Deshpande, B.Agr. (Bombay), *Assistant Director, Nanded.* 1
- Sesh Rao Nandedkar, B.Sc.Agr. (Bombay), *Agricultural Assistant, Bhir.* 1
- R. J. Bakhtul, B.Sc.Agr. (Allahabad), *Agricultural Assistant, Aurangabad.* 1
- Md. Luqman, B.Sc.Agr. (Nagpur), *Agricultural Assistant, Hingoli.* 1
- B. R. Koppikar, B.Agr. (Bombay), *Assistant Farm Superintendent, Parbhani.* 1
- Kishen Narayan Waghne, B.Sc., B.Sc.Agr. (Allahabad), *Agricultural Assistant, Deglur.* 1
- D. D. Deshmukh, B.Sc.Agr. (Bombay), *Agricultural Assistant, Adilabad.* 1
- Hafizuddin, B.Agr. (Bombay), *Agricultural Assistant, Bhainsa.* 1
- K. K. Dandavate, B.Sc.Agr. (Bombay), *Agricultural Assistant, Jalna.* 1
- Abdul Majid Khan, L.Agr. (Mysore), *Farm Superintendent, Rooty Farm, Bhir.* 1
- Y. K. Javadekar, B.Sc. (Madras), B.Agr. (Bombay), *Agricultural Assistant, Aurangabad.* 1

|  |              |
|--|--------------|
| Y. G. Talnikar, B.Sc.Agr. (Bombay), <i>Agricultural Assistant, Nanded.</i>                               | Subject<br>1 |
| V. Bhaskar Rao, B.Sc.Agr., <i>Agricultural Assistant, Parbhani.</i>                                      | 1            |
| Dharwakar, B.Agr. (Bombay), <i>Embankment Officer, Parbhani.</i>   | 1            |
| S. M. J. Kazmi, B.Agr. (Bombay), <i>Farm Superintendent and in-charge Agricultural School, Parbhani.</i> | 1            |

## II. Warangal Division

|  |   |
|--|---|
| T. K. Venkat Krisnan, L.Agr. (Nagpur), <i>Deputy Director, Warangal Division.</i>              | 1 |
| Mirza Zulfiquar Ali Baig, Dip. Agriculture, <i>Assistant Director, Nalgonda.</i>               | 1 |
| D. V. Subba Rao, L.Agr. (Nagpur), <i>Assistant Director, Warangal.</i>                         | 1 |
| Purushottam Chari, B.Sc., B.Sc.Agr. (Madras), <i>Agricultural Assistant, Nalgonda.</i>         | 1 |
| H. S. Albur, B.Agr. (Bombay), <i>Embankment Officer, Warangal.</i>                             | 1 |
| G. B. Sharma, B.Sc.Agr. (Madras), <i>Farm Superintendent, Warangal.</i>                        | 1 |
| K. Radhakrishna Rao, B.Sc.Agr. (Madras), <i>Agricultural Assistant, Karimnagar.</i>            | 1 |
| Purna Chandra Rao, B.Sc.Agr., <i>Agricultural Assistant, Khamam.</i>                           | 1 |
| G. Satyanarayan Swami, B.Sc.Agr., <i>Agricultural Assistant, Devar-konda.</i>                  | 1 |
| K. Sitaram Rao, B.Sc.Agr., <i>Agricultural Assistant, Warangal.</i>                            | 1 |
| B. Ramchandra Reddy, B.Sc.Agr. (Punjab), <i>Agricultural Assistant, Huzurabad.</i>             | 1 |
| Sree Ram Murthy, B.Sc.Agr., <i>Superintendent, Tobacco Research Station, Madira, Warangal.</i> | 1 |
| Nageshwar Rao, B.Sc.Agr. (Nagpur), <i>Agricultural Assistant, Asifabad.</i>                    | 1 |

## III. Nizamabad Division

|   |   |
|---|---|
| Gocind Rao Hardikar, B.Agr. (Bombay), <i>Deputy Director, Nizamabad.</i>  | 1 |
| Vacant, <i>Assistant Director, Nizamabad.</i>   |   |
| T. Somasunderam, B.Sc.Agr. (Madras), M.Sc. (Benares), <i>Farm Superintendent, Agricultural Research Station, Rudroor.</i> | 1 |
| Hissamuddin Abde Ali Qayumi, B.Sc.Agr. (Nagpur), <i>Farm Superintendent, Sangareddi.</i>                                  | 1 |
| P. V. Laxman Rao, B.Sc.Agr. (Madras), <i>Agricultural Assistant, Medak.</i>   | 1 |
| S. K. Sastry, B.Sc. (Madras), B.Sc.Agr. (Madras), A.I.R.I., <i>Assistant, Rudroor : sugarcane.</i>                        | 1 |
| Govind Rao, B.Sc.Agr. (Madras), <i>Assistant Farm Superintendent, Rudroor.</i>  | 1 |
| Parinjikar, B.Sc.Agr. (Bombay), <i>Agricultural Assistant, Nizamabad</i>  | 1 |
| T. Reddibabu, B.Sc.Agr. (Madras), <i>Agricultural Assistant, Banswada.</i>  | 1 |
| Gulam Ahmed, B.Sc.Agr. (Allahabad), <i>Agricultural Assistant, Armoor.</i>  | 1 |
| Uma Maheshwar Rao, B.Sc.Agr., <i>Farm Superintendent, Edpally Farm.</i>   | 1 |



#### IV. Raichur Division

|   |   |
|---|---|
| Sarvottam Rao, B.Agr. (Bombay), <i>Deputy Director, Raichur.</i>                                      | 1 |
| Vacant, <i>Assistant Director, Gulbarga.</i>  | 1 |
| Dattatraya Rao, B.A. (Osmania), B.Sc.Agr. (Benares), <i>Agricultural Assistant, Gulbarga.</i>         | 1 |
| B. Suryanarayam, B.Sc.Agr., <i>Farm Superintendent, Raichur.</i>                                      | 1 |
| Md. Younus Khan, <i>Farm Superintendent, Dhariesagur.</i>   | 1 |
| Makhdum Hussain Ladkhan, B.Agr. (Bombay), <i>Agricultural Officer, Gangavathy.</i>                    | 1 |
| Sayed Mahmood, L.Agr. (Mysore), <i>Agricultural Officer, Yadgir.</i>                                  | 1 |
| A. R. Bettigeri, B.Agr. (Bombay), <i>Agricultural Officer, Osmanabad.</i>                             | 1 |
| Syed Kifayatullah, B.Sc.Agr. (Nagpur), <i>Agricultural Officer, Raichur.</i>                          | 1 |
| V. V. Suryanarayan Murthy, B.Sc.Agr., <i>Farm Superintendent, Dhariesagur.</i>                        | 1 |
| D. V. Narayanayya, Dip.Agr. (Bombay), <i>Agriculturist, Tungabhadra Research Station, Dhadesagur.</i> | 1 |
| P. K. Savanur, B.Agr. (Bombay), <i>Assistant Director of Agriculture, Latur.</i>                      | 1 |
| Sartaj Baig Khan, B.Sc.Agr. (Leeds), <i>Embankment Officer, Raichur.</i>                              | 1 |
| V. Y. Deshpande, B.Sc.Agr., <i>Agricultural Assistant, Bidar.</i>                                     | 1 |
| R. V. Deshmukh, B.Sc.Agr. (Nagpur), <i>Agricultural Assistant, Latur.</i>                             | 1 |

#### GROW MORE FOOD CAMPAIGN AND AGRICULTURAL PROPAGANDA AND EXTENSION

|  |   |
|--|---|
| Rai Prithvi Raj, B.Agr. (Bombay), <i>Deputy Director in Charge, Agricultural Propaganda and Extension.</i> | 1 |
| Vacant, <i>Assistant Director in Charge Agricultural Propaganda and Extension.</i>                         |   |
| V. K. Kulkarni, B.Agr. (Bombay), <i>Embankment Officer, Hyderabad.</i>                                     | 1 |
| Mahboob Ali Khan, L.Agr. (Mysore), <i>Farm Superintendent, Himayetsagar.</i>                               | 1 |
| D. R. Vaidya, B.Sc.Agr. (Nagpur), <i>Agricultural Officer, Hyderabad.</i>                                  | 1 |
| Fiazuddin, B.Sc.Agr. (Benares), <i>Agricultural Officer, Mahboobnagar.</i>                                 | 1 |
| Pyare Mohanlal, B.Sc.Agr. (Nagpur), <i>Farm Superintendent, Charkupalli : Dindi project.</i>               | 1 |
| S. H. Talib, <i>Poultry Assistant, Himayetsagar.</i>   | 1 |
| N. Chandriah Naidu, B.Sc.Agr., <i>Agricultural Assistant, Nagarkarnool.</i>                                | 1 |
| I. Ramchandra Rao, L.Agr. (Mysore), <i>Assistant Farm Superintendent, Charkupalli.</i>                     | 1 |
| Umar Khan, <i>Farm Superintendent, Kandukur : Dindi project.</i>   | 1 |
| Jai Pal Krishen, Inter Agriculture (England), <i>Assistant Farm Superintendent, Himayatsagar.</i>          | 1 |

#### Grow More Food

|   |   |
|---|---|
| Abdul Wahab, <i>Assistant Controller of Manures, Hyderabad.</i>           | 1 |
| H. B. Kulkarni, B.A., <i>Assistant, Oil Cake Distribution, Hyderabad.</i> | 1 |

|  |         |
|--|---------|
|  | Subject |
| Zawar Hussain, Assistant, Oil Cake Distribution, Hyderabad.  | 1       |
| B. Narsimhachar, B.A. (Osmania), Junior Assistant, Oil Cake Distribution, Hyderabad.   | 1       |
| R. K. Deshmukh, B.A. (Aligarh), Junior Assistant, Oil Cake Distribution, Hyderabad.  | 1       |
| S. G. Ranade, B.Sc.Agr., Assistant, Oil Cake Distribution, Tandur.   | 1       |
| Shuthari, B.A. (Osmania), Assistant, Oil Cake Distribution, Nizamabad.   | 1       |
| Mohmed Sultan, B.A. (Osmania), Junior Assistant, Oil Cake Distribution, Warangal.  | 1       |
| <b>Composting</b>  |         |
| N. S. Nagarkatti, B.Agr. (Bombay), Biochemist, Hyderabad Division.   | 25      |
| Nageshwar Rao, B.Sc.Agr., Assistant Biochemist, Nizamabad.   | 25      |
| B. J. M. Reddy, B.Sc.Agr. (Benares), Assistant Biochemist, Aurangabad.   | 25      |
| C. Venkateshwar Rao, B.Sc.Agr., Assistant Biochemist, Gulbarga.  | 25      |
| Jalaluddin, B.Sc. (Andhra), Assistant Biochemist, Warangal.  | 25      |
| <b>Agricultural Chemistry and Soils</b>  |         |
| A. D. Desai, B.Sc., B.Agr. (Bombay), Ph.D. (Aberdeen), Agricultural Chemist, Hyderabad Division.   | 5       |
| Abdul Huq, Dip.Agr. M.S. (Texas), Soil Physicist, Dhariesugur, Raichur District.   | 5       |
| Shameem Zuhrie, B.Sc. (Aligarh), Dip. Agr. (Glasgow), M.S. (Minnesota, U.S.A.), Assistant Agricultural Chemist, Hyderabad Division.      | 5       |
| M. Krishna Reddy, B.Sc.Agr. (Nagpur), A.I.A.R.I., Assistant, Soil Research, Rudroor, Nizamabad Division.                                 | 5       |
| S. Perumal, B.Sc. (Madras), Senior Survey Assistant, Himayetsagar, Hyderabad Division.   | 5       |
| Joshi, B.Sc. (Bombay), Senior Assistant, Soil Analysis, Himayetsagar, Hyderabad Division.  | 5       |
| Ch. Kirshnamurthy, B.Sc., B.Sc.Agr. (Madras), Ph.D. (California), Junior Assistant, Chemistry Section, Himayetsagar, Hyderabad Division. | 5       |
| T. Seshgiri Rao, B.Sc. (Andhra), Junior Assistant, Soil Research, Dindi, Mahboobnagar District.  | 5       |
| Ambadas Rao, B.Sc. (Osmania), Junior Assistant, Soil Survey, Himayetsagar, Hyderabad Division.   | 5       |
| S. Ranade, B.Sc. (Bombay), Junior Assistant, Alkaline Soils, Rudroor, Nizamabad District.  | 5       |
| V. Seetharama Rao, B.Sc. (Osmania), Junior Assistant, Oil Analysis, Himayetsagar, Hyderabad Division.                                    | 5       |
| <b>Plant Breeding</b>  |         |
| S. Nanjundiah, B.Agr. (Bombay), A.I.A.R.I. (Pusa), Economic Botanist, Himayetsagar, Hyderabad Division.                                  | 4       |
| L. G. Kulharni, B.Agr. (Bombay), Ph.D. (Minnestota, U.S.A.), Technical Assistant, Castor, Himayetsagar, Hyderabad Division.              | 4       |

## REPUBLIC OF INDIA

Subject

|   |   |
|---|---|
| C. A. Giddeon, B.Agr. (Bombay), A.I.A.R.I. (Delhi), <i>Assistant Economic Botanist, Parbhani.</i>               | 4 |
| M. S. Powar, B.Sc. (Madras), B.Agr. (Bombay), M.S. (Cornell). <i>Assistant Economic Botanist.</i>               | 4 |
| N. G. Masur, B.Agr. (Bombay), <i>Senior Botanical Assistant, Warangal.</i>                                      | 4 |
| Mohomed Jaffer, M.Sc. (Osmania). (On deputation to the U.S.A. for higher training in plant genetics.)           | 4 |
| B. P. Joshi, B.Sc.Agr. (Bombay), <i>Senior Assistant, Rudroor, Nizamabad District : paddy.</i>                  | 4 |
| S. Venugopal Rao, B.Sc.Agr. (Nagpur), <i>Senior Assistant, Dhariesagar, Raichur District : wheat and jowar.</i> | 4 |
| S. Vithal Rao, B.Sc.Agr. (Bombay), <i>Assistant, Himayetsagar, Hyderabad : paddy.</i>                           | 4 |
| M. V. Gopalkrishna Sharma, B.Sc.Agr., <i>Junior Assistant, Parbhani : jowar ; wheat.</i>                        | 4 |
| G. V. Ramana Murthy, B.Sc.Agr., <i>Junior Assistant, Himayetsagar, Hyderabad : paddy.</i>                       | 4 |
| K. Ramiah, B.Sc. Agr., <i>Assistant, Rudroor, Nizamabad District : paddy.</i>                                   | 4 |
| Madhav Rao, L.Agr. (Mysore), <i>Junior Assistant, Dhariesagar, Raichur District : wheat ; jowar.</i>            | 4 |
| B. G. Bhat, <i>Junior Assistant, Dindi, Mahbubnagar District : paddy.</i>                                       | 4 |
| Sreeramuloo, B.Sc. (Osmania), <i>Junior Assistant, Raichur : crops ; weather.</i>                               | 4 |
| Sharifuddin, B.Sc. (Osmania), <i>Junior Assistant, Parbhani : crops ; weather.</i>                              | 4 |
| Naseeruddin, B.Sc.Agr., <i>Assistant : castor H.S.1 distribution ; jad cherla.</i>                              | 4 |
| D. S. Srikant, B.Sc.Agr., M.Sc.Agr. (Bombay), <i>Botanical Assistant, Parbhani.</i>                             | 4 |
| C. Laxminarayan, B.Sc.Agr. (Benares), <i>Botanical Assistant, Himayetsagar.</i>                                 | 4 |
| M. Shankar Rao, B.Sc.Agr. (Benares), <i>Pulse Assistant, Warangal.</i>  | 4 |

### Entomology

|  |    |
|--|----|
| Mohomed Quaderuddin, M.Sc. (Osmania), D.I.C., Ph.D. (Lond.), <i>Entomologist, Hyderabad.</i>   | 19 |
| G. Ranga Rao, B.Sc., B.Sc.Agr. (Madras), <i>Assistant Entomologist, Aurangabad.</i>            | 19 |
| K. Krishna Murthy, B.Sc.Agr., <i>Assistant, Hyderabad.</i>                                     | 19 |
| A. S. Chalapathy Rao, B.Sc.Agr. (Madras), A.I.A.R.I. (Delhi), <i>Senior Assistant, Bodhan.</i> | 19 |
| Vacant, <i>Senior Assistant, Himayetsagar, Hyderabad.</i>                                      |    |
| D. V. Murthy, L.Agr. (Mysore), <i>Junior Entomological Assistant, Bodhan.</i>                  | 19 |

### Plant Pathology

|  |   |
|--|---|
| Syed Vaheeduddin, B.Agr. (Bombay), Ph.D. (Minnesota, U.S.A.), <i>Plant Pathologist, Hyderabad.</i> | 6 |
| Vacant. <i>Senior Assistant, Himayetsagar.</i>   |   |



|   |              |
|---|--------------|
| Salabat Ali, M.Sc. (Osmania), A.I.A.R.I., <i>Senior Assistant, Himayetsagar.</i>    | Subject<br>6 |
| S. V. Pandit, B.Sc. (Bombay), B.Sc.Agr. (Madras), <i>Junior Assistant, Rudroor.</i> | 6            |
| Vacant, <i>Junior Assistant, Himayetsagar.</i>                                      |              |
| Vacant, <i>Junior Assistant, Himayetsagar.</i>                                      |              |

## Horticultural Section

|   |   |
|---|---|
| R. S. Shanker Pile, B.A., B.Agr., <i>Horticulturist, Hyderabad.</i>                                       | 9 |
| Mohd. Mohibullah Farooqi, B.Agr., M.S. (Los Angeles), <i>Horticulturist, Aurangabad : fruit research.</i> | 9 |
| Jagannath Reddi, B.Agr., <i>Assistant Horticulturist, Aurangabad.</i>                                     | 9 |
| Sunder Raman, B.Sc.Agr., <i>Assistant Horticulturist, Himayetsagar.</i>                                   | 9 |
| Mohiuddin Ali Khan, B.Sc.Agr., <i>Horticultural Assistant, Sangareddi.</i>                                | 9 |
| Sanpath Kumar, L.Agr., <i>Horticultural Assistant, Warangal.</i>  | 9 |
| R. Sreeram Murthy, B.Sc.Agr., <i>Horticultural Assistant, Rudroor, Nizamabad.</i>                         | 9 |
| S. Musharruf Hussain, L.Agr., <i>Horticultural Assistant, Hyderabad.</i>                                  | 9 |
| D. R. Kulkarni, B.Sc.Agr., <i>Horticultural Assistant, Bidar.</i>   | 9 |
| T. Chellappa, B.Sc.Agr. (Madras), <i>Fruit Survey Assistant.</i>  | 9 |
| H. V. R. Iyengar, L.Agr. (Mysore), <i>Fruit Survey Assistant.</i>   | 9 |
| Abdul Wahab, B.Sc.Agr., (Madras), <i>Fruit Survey Assistant.</i>  | 9 |
| R. Ramchandra Rao, B.A., B.Sc.Agr. (Benares), <i>Fruit Survey Assistant.</i>                              | 9 |
| A. S. Murthy, B.Sc.Agr. (Benares), <i>Fruit Survey Assistant.</i>   | 9 |

## Cotton Research Section

### GOORANI IMPROVEMENT SCHEME, Nanded.

|   |   |
|---|---|
| V. K. Bederkar, B.A. (Madras), B.Agr. (Bom), M.S. (U.S.A.), <i>Cotton Research Botanist, Nanded.</i>    | 3 |
| Vacant, <i>Assistant Cotton Research Botanist, Nanded.</i>  |   |
| Vacant, <i>Assistant Cotton Research Botanist and Officer in Charge, Plant Breeding Station, Latur.</i> |   |
| H. R. Naik, <i>Technological Assistant, Nanded.</i>   | 3 |
| V. K. Joshi, B.Agr. (Bombay), <i>Superintendent, Cotton Research Station, Nanded.</i>                   | 3 |
| J. P. Nirmal, <i>Research Assistant, Latur.</i>   | 3 |
| V. N. Purna Pragna, M.A. (Mysore), <i>Plant Breeding Assistant, Plant Breeding Station, Madhol.</i>     | 3 |

### KUMPTA COTTON IMPROVEMENT SCHEME, Raichur.

|   |   |
|---|---|
| M. R. H. Quereishi, M.Sc. (Osmania), <i>Senior Research Assistant, Raichur.</i> | 3 |
| M. V. Chitnis, <i>Inspector Cotton Seed (R.K.19) Distribution, Raichur.</i>     | 3 |

### SCHEME FOR THE IMPROVEMENT OF COTTON OF PARBHANI

|  |   |
|--|---|
| N. R. Yardi, B.Agr. (Poona), <i>Cotton Breeder, Parbhani.</i>              | 3 |
| J. Roberts, B.Sc. (Agr.) (Allahabad), <i>Graduate Assistant, Parbhani.</i> | 3 |

# REPUBLIC OF INDIA

Subject

## UNIVERSITY COLLEGE OF AGRICULTURE

Hyderabad Division.

H. Amir Ali, B.Agr. (Bombay), Ph.D. (Cornell), *Principal, Agricultural College and Dean, Faculty of Agriculture.* 1, 27

### AGRONOMY

M. B. Hussain, M.A., B.Sc. (Hons.) (Edin.), *Professor of Agronomy*, 2, 7, 26, 27  
Suryanarayan Rao, *Lecturer in Agronomy.* 2, 7

### BOTANY

Husain Ali Razvi, B.Agr. (Bombay), Ph.D. (Bangor, Wales), *Reader.* 3, 4  
B. V. Ramanarao, M.Sc. (Benares), *Lecturer.* 3, 4

### CHEMISTRY

P. Krishnamoorthy, B.Sc. (Madras), B.Agr. (Bombay), *Lecturer.* 5, 24  
Narayanachari, M.Sc. (Osmania), *Lecturer.* 24

### ENTOMOLOGY

Dr. Quaderuddin, M.Sc. (Osmania), Ph.D. (Lond.), *Part-time Professor.* 19  
M. Sulaiman, B.Sc. (Ontario, Canada), *Lecturer.* 19, 20

### HORTICULTURE

Shanker Pile, B.A. (Madras), B.Agr. (Bombay), *Part-time Professor.* 9  
Kazim Hussain, B.Sc. (Agr.) (Nagpur), *Lecturer.* 9

### PLANT PATHOLOGY

S. Vaheeduddin, B.Agr. (Bombay), Ph.D. (Minnesota), *Part-time Professor.* 20  
M. Moinuddin, M.Sc. (Osmania), *Demonstrator.* 20

### ANIMAL HUSBANDRY

A. M. Naziruddin, G.B.V.C. (Bombay), *Lecturer.* 18  
M. Sayeedullah Khan, B.Sc. (Osmania), B.Agr. (Nagpur), *Lecturer.* 18

### AGRICULTURAL ENGINEERING

Abdul Majeed, B.Agr. (Bombay), *Professor.* 28  
T. Satyanarayana Rao, B.A., B.Agr. (Bombay), *Lecturer.* 28

### AGRICULTURAL ECONOMICS.

H. Amir Ali, B.Agr. (Bombay), Ph.D. (Cornell), *Professor.* 1, 27

### FARM SECTION

M. Akil Khan, L.Agr. (Nagpur), *Farm Superintendent.* 1

### Veterinary Officers

K. Raghava Chari, *Head, Veterinary Investigation Officer, Hyderabad State : veterinary research.* 13  
S. Nurul Mohtida, G.M.V.C.P.G., *Assistant Disease Investigation Officer, Hyderabad Division : poultry.* 13.

|   |               |
|---|---------------|
| M. Mahmoodullah, B.Sc., M.R.C.V.S. (Lond.), <i>Director, Veterinary Services, Hyderabad.</i>                                | Subject<br>13 |
| Syed Abdul Jabbar, G.B.V.C., I.D.D., M.Sc. (Cornell) (U.S.A.), <i>Deputy Director, Animal Husbandry Section, Hyderabad.</i> | 13            |
| Dr. K. S. Shetty, G.M.V.C., Ph.D., <i>Deputy Director, Veterinary Section, Hyderabad.</i>                                   | 13            |
| K. J. Devadanam, B.A., M.Sc. (U.S.A.) in Genetics, <i>Geneticist, Hyderabad.</i>  | 13            |
| Munshi Abdul Rahman, G.B.V.C., I.D.D., <i>Superintendent, Cattle Breeding Farm, Himayatsagar.</i>                           | 13            |

## MYSORE

### AGRICULTURAL DEPARTMENT

(Tel. : 2804).

#### DIRECTION

|   |   |
|---|---|
| K. H. Srinivasan, M.A., B.Sc. (Edin.), <i>Director of Agriculture.</i>                          | 1 |
| Dr. B. T. Narayanan, B.A., Ph.D., D.I.C., <i>Deputy Director of Agriculture.</i>                | 1 |
| M. Mallaraj Urs, B.Sc., B.Sc. (Agr.) (Edin.), <i>Additional Deputy Director of Agriculture.</i> | 1 |

#### CHEMISTRY

|   |    |
|---|----|
| Dr. S. V. Govindarajan, B.Sc. (Hons.), Ph.D., D.I.C., <i>Agricultural Chemist.</i>  | 24 |
| M. Subbiah, B.A., <i>Bio-Chemist, in charge of Compost Scheme.</i>                  | 25 |
| Dr. N. G. Chokkanna, M.Sc., Ph.D., <i>Assistant Chemist, Coffee Quality Scheme.</i> | 5  |

#### PLANT PATHOLOGY

|   |   |
|---|---|
| S. V. Venkatarayan, B.A., <i>Plant Pathologist.</i>                 | 6 |
| N. S. Venkatakrishnaiya, B.Sc., <i>Assistant Plant Pathologist.</i> | 6 |

#### ENTOMOLOGY

|   |    |
|---|----|
| B. Krishnamurti, B.Sc., F.R.E.S., <i>Government Entomologist.</i>             | 19 |
| D. Seshagiri Rao, B.Sc., <i>Assistant Entomologist.</i>                       | 19 |
| M. Puttarudriah, B.Sc., <i>Assistant Entomologist on deputation to U.S.A.</i> | 19 |
| M. Appanna, B.Sc., <i>Assistant Entomologist (Biological Control Scheme).</i> | 19 |

#### BOTANY

|  |   |
|--|---|
| Dr. L. S. Dorasami, M.Sc., Ph.D., <i>Economic Botanist.</i>                    | 7 |
| T. Srinivasamurthy, M.Sc., <i>Senior Assistant Botanist.</i>                   | 7 |
| G. Sreenivasa Iyengar, M.Sc., <i>Cotton Research Officer.</i>                  | 7 |
| K. Gopaliengar, M.Sc., <i>Oilseeds Research Officer.</i>                       | 7 |
| B. Venkoba Rao, B.Sc. (Mys.), M.S. (Lous.), <i>Sugarcane Research Officer.</i> | 7 |



ENGINEERING

|  |    |
|--|----|
| S. Venkatasubbiah, B.E., <i>Agricultural Engineer (Government of India Service).</i> | 28 |
| M. Muniyappa, B.E., A.M.I.E., <i>Agricultural Engineer.</i>                          | 28 |
| Samuel Danaraj, B.E., <i>Tractor Engineer.</i>                                       | 28 |

VETERINARY AND ANIMAL HUSBANDRY SERVICES

|  |           |
|--|-----------|
| Dr. P. M. Narainswamy Naidu, B.Sc., L.V.P., D.Sc., F.F.A.S., <i>Director of Animal Husbandry Services.</i>                           | 1, 18, 22 |
| P. U. Nayar, G.B.V.C., P.G., <i>Superintendent, Mysore Serum Institute.</i>  | 1         |
| J. Muniyappa, L.V.P., Assoc. I.D.R.I., <i>Sheep Development Officer.</i>   | 17        |
| V. S. Kuppuswamy Mudaliar, G.M.V.C., P.G., <i>Assistant Disease Investigation Officer (Sheep and Goats Diseases—I.C.A.R. Scheme)</i> | 22        |
| C. Venkataswamy, G.V.Sc., <i>Assistant Disease Investigation Officer (Poultry Diseases—I.C.A.R. Scheme).</i>                         | 22        |
| N. S. Krishna Rao, B.A., L.V.P., <i>Helminthologist.</i>   | 21        |
| M. G. Sekharan, L.V.P., <i>Assistant to the Veterinary Research Officer.</i>   | 22        |
| P. C. Adaikalam, G.M.V.C., <i>Manager, Cattle Breeding Station.</i>  | 14        |
| S. K. Venkata Rao, <i>Amrit Mahal Officer.</i>   | 18        |
| Dr. H. D. R. Iyengar, M.Sc., Ph.D. (U.S.A.), <i>Fisheries Officer.</i>   | 17        |
| H. S. Lakke Gowda, M.Sc., Assoc. I.V.R.I., <i>Nutrition Chemist.</i>   | 15        |
| Syed Abdul Rahaman, M.Sc., <i>Bio-Chemist : poultry.</i>   | 25        |
| G. V. Dodda Ramiya, B.A. (Hons.), M.Sc., <i>Animal Husbandry Statistician.</i>   | 29        |
| G. V. Ramiya, G.B.V.C., P.G., <i>Superintendent, Hessarghatta Grass and Stud Farm.</i>   | 18        |
| B. G. Gupta, <i>Apiarist.</i>  | 18        |
| Dr. P. Mc. Isaac, B.Sc. (Hons.) (Edin.), Ph.D. (Edin.), <i>Assistant Director.</i>   | 18        |

FOREST DEPARTMENT

(Tel. : 2346).

|  |        |
|--|--------|
| M. A. Muthanna, B.Sc., I.F.S. (Dip.), <i>Chief Conservator of Forests in Mysore : direction.</i>                       | 10, 11 |
| M. N. Ramaswamy, M.Sc., D.Sc. (Munich), <i>Forest Research Laboratory, Bangalore : chemistry, cellulose and M.F.P.</i> | 11     |
| C. Jayarama Reddy, M.Sc., A.I.F.C., <i>Forest Research Laboratory, Bangalore : silviculture and management.</i>        | 10     |

JAMMU AND KASHMIR STATE

FOREST DEPARTMENT

(Tel. : 153).

|  |       |
|--|-------|
| Th. Harnam Singh Pathania, <i>Chief Conservator of Forests, Srinagar.</i>                      | 1, 10 |
| L. Shadi Lal Vadehra, <i>Conservator of Forests, Kashmir Circle, Srinagar (Tel. : 189).</i>    | 10    |
| D. Kewal Kishen Nanda, <i>Conservator of Forests, Jammu Forest Circle, Jammu (Tel. : 299).</i> | 10    |

|  |               |
|--|---------------|
| Sri Dhar Dhar, <i>Conservator of Forests, Working Plan and Research Division, Srinagar (Kashmir).</i>                                    | Subject<br>10 |
| P. N. Kaul, <i>Assistant Conservator of Forests, in charge Research Division, Srinagar (Kashmir).</i>                                    | 10            |
| S. N. Razdan, <i>Assistant Conservator of Forests, Utilization Division, Baramulla : marketing of timbers and minor forest products.</i> | 11            |

## AGRICULTURAL DEPARTMENT

(Tel. : 87).

|   |   |
|---|---|
| G. M. Butt, <i>Director of Agriculture.</i> | 1 |
|---|---|

## VETERINARY DEPARTMENT

(Tel. : 41).

|  |    |
|--|----|
| V. L. Wazir, <i>Director of Veterinary Department.</i>   | 1  |
| R. C. Haksar, <i>Officer in Charge, Government Sheep Breeding and Research Farm, Banihal, Kashmir.</i> | 14 |
| Mohd. Ramzan, <i>Veterinary Disease Investigation Officer, Jammu and Kashmir.</i>                      | 16 |

## GOVERNMENT OF UNITED STATE OF TRAVANCORE AND COCHIN

### CENTRAL RESEARCH INSTITUTE

#### Division of Applied Chemistry

|  |               |
|--|---------------|
| Dr. P. V. Nair, M.Sc., D.Phil. (Oxon.), <i>Professor of Applied Chemistry.</i>                     | 5, 11, 24, 25 |
| T. R. Narayana Pillai, M.Sc. A.I.I.Sc., A.R.I.C., <i>Public Analyst.</i>                           | 5, 17, 25     |
| A. P. A. Brite-Muthunayagom, B.Sc. (Agr.), M.Sc. (Cornell), <i>A.R.I.C., Agricultural Chemist.</i> | 2, 5, 8, 25   |
| M. Sreedharan Pillai, B.A., M.Sc., <i>Chemical Assistant.</i>                                      | 11, 24        |
| P. G. Nilakanta Pillai, B.A., M.Sc., <i>Water Analyst.</i>   | 24, 25        |
| M. C. Abraham, B.Sc. (Agr.), D.I.C. (Lond.), <i>Assistant Agricultural Chemist.</i>                | 2, 8          |
| N. Subramonia Varier, B.A., M.Sc., <i>Senior Chemist, Fishery Development Scheme.</i>              | 5, 11, 24, 25 |
| K. K. Narayana Pillai, B.A., B.L., <i>Chemical Assistant.</i>                                      | 5, 24         |
| K. S. Madhavan Pillai, B.A., M.Sc., <i>Agricultural Chemical Assistant.</i>                        | 5, 11, 24     |
| S. S. Moosath, M.Sc., <i>Archaeological Chemist.</i>   | 24            |
| T. A. Ramakrishnan, M.Sc., <i>Chief Chemist, Government Shark Liver Oil Factory.</i>               | 5, 11, 24, 25 |
| Miss P. Saradamma, B.A., L.T., M.Sc., <i>Research Assistant.</i>                                   | 5, 11, 24     |
| P. Janardana Iyer, M.Sc., <i>Assistant Analyst.</i>  | 17, 25        |
| P. S. Narayanan Nambiar, M.Sc., <i>Senior Chemist, Model Salt Factory.</i>                         | 17, 25        |
| S. Janardana Iyer, L.T.C. (Hons.), <i>Assistant Analyst.</i>                                       | 17, 25        |
| T. K. Parameswara Kaimal, B.A., <i>Assistant Chemist, Soil Survey Scheme.</i>                      | 2, 24         |
| N. Subramoney, B.Sc., L.T., M.Sc., <i>Assistant Chemist, Soil Survey Scheme.</i>                   | 2, 25         |

## REPUBLIC OF INDIA

|  | Subject   |
|--|-----------|
| K. Sadsivan Pillai, B.Sc., <i>Assistant Chemist, Fishery Development Scheme.</i> | 24, 25    |
| V. Krishna Pillai, B.Sc., <i>Hydrologist, Fishery Development Scheme.</i>        | 24, 25    |
| K. R. Janardhanan Nair, B.A., <i>Technical Assistant.</i>                        | 2, 24     |
| C. S. Bhaskaran Nair, B.Sc., <i>Technical Assistant.</i>                         | 5, 24     |
| S. Lewis Pillai, B.Sc., <i>Assistant Chemist, Model Salt Factory.</i>            | 24        |
| P. K. Mathew, M.Sc., <i>Assistant Chemist, Soil Survey Scheme.</i>               | 2, 24, 25 |
| C. J. Philip, B.Sc., <i>Technical Assistant.</i>                                 | 24, 25    |
| Miss K. Pankajakshy Amma, B.Sc.  | 5, 24     |
| Miss T. Pankajakshy Amma, B.Sc.  | 5, 24     |
| Miss Anna Mariam Chacko, B.Sc.L.T.   | 24, 25    |
| Miss Annie Koshy, M.Sc.  | 24, 25    |
| Miss N. Saraswathy Bai, B.Sc.  | 5, 24     |
| K. N. Gopinathan Nair, B.Sc.   | 5, 11, 24 |
| R. Krishna Pillai, B.Sc.   | 24        |
| P. S. Mahadevan, B.Sc.   | 5, 24     |
| E. John Jacob, B.Sc.   | 24, 25    |

### Research Workers.

## Division of Applied Biology

|   |          |
|---|----------|
| Dr. A. Abraham, M.A., M.Sc., Ph.D. (Cornell), <i>Honorary Plant Geneticist.</i> | 3, 4, 5  |
| P. Kumara Pillai, M.Sc., <i>Economic Botanist.</i>                              | 3, 4, 12 |
| A. J. Chacko, M.Sc., <i>Assistant Economic Botanist.</i>                        | 3, 4     |
| K. V. Joseph, M.Sc., <i>Agr. Entomologist.</i>                                  | 19       |
| G. Renga Iyer, M.Sc., <i>Assistant Entomologist.</i>                            | 19       |
| G. K. Nair, M.Sc., <i>Assistant Research Officer.</i>                           | 19       |
| J. Samraj, M.Sc., <i>Mycologist.</i>  | 20       |

## Division of Statistics

|   |    |
|---|----|
| Dr. U. Sivaraman Nair, M.A., Ph.D. (Lond.), <i>Professor of Statistics.</i> | 29 |
| Miss Aleyamma George, M.Sc., <i>Research Assistant.</i>                     | 29 |
| S. Janardana Iyer, M.Sc., <i>Research Assistant.</i>                        | 29 |
| K. C. Sreedharan Pillai, M.Sc., <i>Research Assistant.</i>                  | 29 |
| V. J. Chacko, M.Sc., <i>Research Assistant.</i>                             | 29 |
| S. Gopalakrishnan Nair, B.Sc., <i>Analyst.</i>                              | 29 |

## Division of Agriculture

|   |       |
|---|-------|
| K. R. Narayana Iyer, B.A. (Madras), M.Sc. (New Jersey, U.S.A.), F.C.S., <i>Director of Agriculture, Soil Science and Crop Nutrition (on leave).</i> | 1, 2  |
| T. C. Kochunni Pillai, B.Agr., <i>Assistant Director of Agriculture, in charge.</i>   | 1, 18 |
| K. Madhavan Nair, B.A., M.Sc., M.S. (Cornell U.S.A.), <i>Botanist, Scheme for the Improvement of Paddy.</i>   | 2, 4  |
| T. R. Kesavan, G.B.V.C., D.V.M., P.G., F.F.Sc., <i>Assistant Director of Animal Husbandry and Veterinary Services.</i>                              | 1, 18 |
| K. N. Nair, G.B.V.C., P.G., <i>Veterinary Disease Investigation Officer.</i>  | 16    |
| K. Gopala Marar, B.A., B.Sc., <i>Economic Botanist.</i>   | 3     |
| N. Ramanatha Menon, B.Sc., <i>Assistant Economic Botanist (Temporary).</i>  | 3     |



|   |         |
|---|---------|
|   | Subject |
| K. I. Tobias, B.Sc., <i>Agricultural Chemist (Officiating).</i> | 5       |
| C. S. Venkitasubban, B.A., B.Agr., <i>Entomologist.</i>         | 19      |
| P. Krishna Menon, B.Agr., <i>Manager, Central Farm.</i>         | 1       |

## BHOPAL

|  |       |
|--|-------|
| K. R. N. Pillai, M.B.E., B.A. (Madras), M.A., B.Sc. (Edin.),<br><i>Secretary, Forests and Fisheries, and Conservator of Forests.</i><br>(Tel. : 14). | 10    |
| Syed Majid Ali, M.Sc. (Alig.), Assoc. I.A.R.I., <i>Agricultural Officer,</i><br><i>in charge Headquarters, Bhopal.</i>                               | 4, 12 |
| Mohd Amin, D.D.R., <i>Assistant Conservator of Forests.</i>  | 10    |
| Mahmood Raza Khan, B.Sc., M.R.H., <i>Divisional Forest Officer,</i><br><i>East.</i>  | 10    |
| Mahmood Ahmad Siddiqi, B.Sc. (Agr.), <i>Farm Superintendent :</i><br><i>agriculture.</i>   | 1     |
| Masha Allah Khan, <i>Farm Superintendent : agriculture.</i>  | 1     |
| Mumtaz Beg, <i>Farm Superintendent : agriculture.</i>  | 1     |

## PATIALA AND EAST PUNJAB STATES UNION

### AGRICULTURAL DEPARTMENT

|   |    |
|---|----|
| S. B. Sardar Kartar Singh, B.Sc. (Agr.), N.D.D., <i>Director of Agri-</i><br><i>culture.</i>  | 1  |
| Sardar Pritam Singh Brar, M.R.C.V.S., <i>Superintendent, Civil</i><br><i>Veterinary Department.</i>   | 1  |
| Sardar Gursham Singh, M.Sc., Ph.D., Assoc. I.A.R.I., <i>Agricultural</i> 3, 4, 12, 20<br><i>Botanist.</i> 22  |    |
| Krishan Nath Synghal, M.Sc., Assoc. I.A.R.I. <i>Agricultural Chemist.</i> 2, 5, 24, 25  |    |
| Sardar Amrik Singh Chema, M.Sc. (Agr.), <i>Assistant Director Agri-</i> 3, 7, 8, 9,<br><i>culture, Patiala Circle.</i> 27, 28   |    |
| Sardar Gurdit Singh, B.Sc. (Agr.), <i>Assistant Director Agriculture,</i> 7, 8, 27, 28<br><i>Kapurthala Circle.</i>   |    |
| Sardar Ranbir Singh, B.Sc. (Agr.), <i>Assistant Director Agriculture,</i> 7, 8, 27, 28<br><i>Faridkot Circle.</i>   |    |
| Sardar Jagir Singh, B.Sc. (Agr.), <i>Assistant Director Agriculture,</i> 7, 8, 27, 28<br><i>Fatehgarh Sahib Circle.</i>   |    |
| Sardar Sewa Singh, G.P.V.C., <i>Deputy Veterinary Superintendent,</i> 13, 16, 18<br><i>Patiala Circle: advance courses in animal husbandry and bio-</i><br><i>logical products.</i> |    |
| Sardar Gurcharan Singh, L.V.P., <i>Deputy Veterinary Superintendent,</i> 13, 16, 18<br><i>Fatehgarh Sahib Circle.</i>   |    |
| Sardar Hari Singh, L.V.P. <i>Deputy Veterinary Superintendent,</i> 13, 16, 18<br><i>Faridkot Circle.</i>  |    |
| Sardar Gurbakhsh Singh, G.P.V.C., <i>Deputy Veterinary Superinten-</i> 13, 16, 18<br><i>dent, Kapurthala Circle.</i>  |    |
| Sardar Amrik Singh, B.Sc. (Hons.), <i>Marketing Officer : marketing</i><br><i>of agricultural produce.</i>  | 27 |

# PAKISTAN

## GOVERNMENT OF PAKISTAN

Subject

### Ministry of Food and Agriculture

Karachi

#### AGRICULTURE DIVISION

- Syed Imam Ahmed, *Deputy Agricultural Development Commissioner* : soils ; fertilizers ; plant nutrition. 1, 2
- S. A. Hamid, M.A., *Director of Statistics* : applied statistics. 29
- Abdul Hanif, M.A. (Pb.), Certificate in Statistics, *Research Investigator* : applied statistics. 29
- Fasihuddin, M.A. (Alig.), *Research Investigator* : applied statistics. 29

#### FORESTS

- S. A. Vahid, B.Sc., B.A. (Oxon.), I.F.S., *Inspector General of Forests* : silviculture. 10

#### PAKISTAN FOREST RANGER COLLEGE,

Upper Topa, Murree Hills (West Punjab).

- S. A. A. Anvery, B.Sc. (Hons.), I.F.S. Diploma, *Director of Research*. 1
- S. M. Ishaq, B.A., B.Sc. (Hons.), M.Sc., *Assistant Forest Utilization Officer* : forest products and utilization. 11
- Dr. A. H. Khan, M.Sc., Ph.D., *Assistant Botanist* : botany and plant pathology. 3, 6

### Ministry of Economic Affairs

Karachi

- Z. H. Chaudhry, B.A. (Wales), *Research Officer* : collection and interpretation of economic and statistical data relating to agricultural problems. 27, 29
- A. K. Yousufzai, M.A. (Economics), LL.B., *Statistical Investigator* : collection of statistical data ; interpretation and representation of such data in appropriate form. 29
- T. M. Khan, M.A. (Economics), *Statistical Investigator* : collection and interpretation of economic and statistical data relating to agricultural problems. 27, 29
- G. M. Khan, M.A. (Economics), *Statistical Investigator* : collection and interpretation of economic and statistical data relating to agricultural problems. 27, 29
- M. Tahir Hamid, M.A., LL.B., *Statistical Investigator* : co-operation in agriculture and industry. 29

### Department of Animal Husbandry

Karachi

- Dr. S. A. Yasin, M.Sc., Ph.D., M.R.C.V.S., *Deputy Animal Husbandry Commissioner, and Director of Animal Husbandry Research Institutes, Peshawar and Comilla* : bacteriology viruses and related immunology ; animal husbandry. 18, 22
- M. A. Khan, M.Sc., G.V.Sc., *Officer on special duty* : entomology (hides and skins). 19

PAKISTAN ANIMAL HUSBANDRY RESEARCH INSTITUTE,  
Comilla (East Bengal).

|  |    |
|--|----|
| S. R. Hasan, B.A., M.R.C.V.S., <i>Officer-in-Charge</i> : biological products. | 17 |
| M. Israil, G.V.Sc., <i>Assistant Research Officer</i> : biological products.   | 17 |
| C. M. Hasan, G.V.Sc., <i>Assistant Research Officer</i> : helminthology.       | 21 |

PAKISTAN ANIMAL RESEARCH INSTITUTE,  
Peshawar (N.W.F. Province)

|   |    |
|---|----|
| Dr. M. Abdus-Salam, Ph.D., L.V.P., <i>Officer-in-Charge</i> : bacteriology ; viruses and related immunology.                              | 22 |
| Dr. Z. A. Hashmi, M.Sc., D.V.M., L.V.P., <i>Research Officer</i> : biological products, poultry and extension.                            | 17 |
| Abdul Wahid, M.Sc., L.V.P., <i>Research Officer</i> : animal production   | 17 |
| M. M. Huq, B.V.Sc., G.M.V.C., <i>Assistant Research Officer</i> : animal pathology.   | 16 |
| M. Jamil, M.Sc., D.V.M., L.V.P., <i>Assistant Research Officer</i> : bacteriology ; viruses and related immunology ; pathology (poultry). | 22 |
| F. G. Ahmed, L.V.P., <i>Assistant Research Officer</i> : bacteriology ; viruses and related immunology ; pathology (poultry).             | 16 |

**Plant Protection Department**

Karachi

|   |       |
|---|-------|
| Dr. Taskhir Ahmed, B.Sc., Ph.D. (Cantab.), <i>Director, Plant Protection</i> : entomology (1. insect ecology) ; (2. control of insect pests.)           | 19    |
| Dr. M. Abdul Qayyum Khan, M.Sc., Ph.D. (Calif.), <i>Plant Protection Entomologist</i> : entomology (insect pests).                                      | 19    |
| Ghulamullah, B.Sc. (Agr.), Assoc. I.A.R.I., <i>Assistant Entomologist</i> : entomology (1. control of field cricket) ; (2. systematics of aphids).      | 19    |
| S. Sadiq Hussain, M.Sc., <i>Assistant Entomologist (Food Storage)</i> : entomology (storage pests).   | 19    |
| Dr. S. Z. Hasnain, M.Sc., Assoc. I.A.R.I., Ph.D. (Minn.), <i>Assistant Plant Pathologist</i> : mycology (systematics) ; plant pathology (cereal rusts). | 6, 20 |
| S. M. Taqi Ahsan, M.Sc., <i>Deputy Locust Entomologist</i> : entomology (locust control).   | 19    |
| Rashid Ahmed, M.Sc., <i>Assistant Locust Entomologist</i> : entomology (locust survey).   | 19    |
| Manzoor Abbas, M.Sc. (Agr.), <i>Locust Technical Officer</i> : entomology (locust control) ; (biology of jassids).                                      | 19    |
| Maqsood Nasir, M.Sc. (Agr.), <i>Assistant, Quarantine Entomologist</i> : entomology (quarantine of pests).  | 19    |
| Ghulam Hussain, M.Sc., <i>Assistant Quarantine Entomologist</i> : entomology (quarantine of pests).   | 19    |
| M. A. Habib, B.Sc., <i>Assistant Quarantine Entomologist</i> : entomology (quarantine of pests).  | 19    |
| M. Rashid Khan, M.Sc., <i>Entomologist, Codling Moth Scheme</i> : entomology (codling moth).  | 19    |



## PROVINCIAL GOVERNMENTS

## WEST PUNJAB

## Department of Agriculture

Lahore

- Malik Sultan Ali Noon, Diploma (Agr.) (Cantab), *Director of Agriculture, Lahore.* 1
- H. G. Sadik, B.A. (Oxon.), *Assistant Director of Agriculture, Lahore.* 1
- Khalifa Amjad Hussain, B.Sc. (Hons.) (Pb.), *Deputy Warden of Fisheries, Lahore : pisciculture.*
- Malik Ahmed Khan, B.Sc. (Agr.) (Pb.), B.Sc. (Edin.), *Assistant Botanist (Fodder), Sargodha : grassland ; herbage and fodder plants.* 8
- A. W. Chaudhry, B.Sc. (Agr.) (Hons.) (Edin.), L.Agr. (Punjab), *Deputy Director of Agriculture, Montgomery : arable crops, and supervision of experimental station.* 1, 7
- K. S. Alhaj Mian Ahmed Ali Soofi, L.Agr. (Pb.), M.R.A.S. (Eng.), *Deputy Director of Agriculture, Rawalpindi : arable crops, and supervision of experimental station.* 1, 7
- Mian Akbar Ali Tur, M.Sc. (Agr.) (Pb.), B.Sc. (Agr.) (Edin.), N.D.D., M.R.A.S., *Deputy Director of Agriculture, Gujranwala : arable crops and supervision of experimental station.* 1, 7
- Ch. Mohammad Hussain, L.Agr. (Pb.), *Deputy Director of Agriculture, Multan : arable crops and supervision of experimental station.* 1, 7
- Mian Abdul Hamid, M.A., B.Sc. (Agr.) (Glasgow), College Diploma Agr. (Glasgow), *Marketing Officer, Lahore : economics.* 27

## WEST PUNJAB AGRICULTURAL COLLEGE,

Lyallpur.

- Dr. Khan A. Rahman, B.Sc. (Edin.), Ph.D. (Cantab.), F.R.E.S., *Principal : entomology.* 19
- Malik Amanat Khan, B.Sc. (Agr.) (Edin.), *Professor of Agriculture and Rural Economics : arable crops.* 7
- Ch. Zafar Alam, B.Sc. (Agr.) (Pb.), M.Sc. (Lond.), F.L.S., *Oilseeds Botanist : plant breeding (oilseeds).* 4
- Agha Ghias-ud-din, B.Sc. (Agr.) (Pb.), B.Sc. (Lond.), M.Sc. (Calif.) Bar-at-Law, *Professor of Botany : plant breeding.* 4
- Dr. Abdus Sattar, B.Sc. (Agr.) (Pb.), Assoc. I.A.R.I., Ph.D. (Lond.), D.I.C. (Lond.), *Plant Pathologist : plant pathology.* 6
- Ch. Sardar Khan, L.A.G., B.Sc. (Agr.) (Pb.), *Cereal Botanist : plant breeding.* 4
- Ch. Karam Rasul, B.Sc. (Agr.) (Pb.), *Assoc. Professor of Agriculture : arable crops.* 7
- Lt.-Commander Abdul Latif, M.Sc. (Agr.) (Pb.), *Assoc. Professor of Entomology : entomology.* 19
- Anwar Hussain, M.Sc. (Hons.), *Agricultural Chemist II : general chemistry.* 24
- K. S. Ch. Sardar Mohammad, B.Sc. (Hons.), M.Sc. (Pb.), *Agricultural Chemist I : soils ; fertilizers ; plant nutrition and plant chemistry.* 2, 5

|   |              |
|---|--------------|
| N. D. Usaf, M.Sc. (Pb.), M.Sc. (Cantab.), <i>Sugarcane Botanist</i> : plant breeding (sugarcane).   | Subject<br>4 |
| Ch. Sultan Ali, B.Sc. (Agr.) (Pb.), B.Sc. (Agr.) (Lond.), Dip. Agr. (Wye), M.R.A.S. (Lond.), <i>Assistant Professor of Agriculture</i> : arable crops.          | 7            |
| Mohammad Abdul Aziz, B.Sc. (Agr.) (Pb.), <i>Assistant Botanist, Oilseeds</i> : plant breeding (oilseeds).   | 4            |
| Ch. Abdul Rashid Khan, M.Sc. (Agr.) (Pb.), <i>Assistant Botanist (Cereal)</i> : plant breeding (cereal).  | 4            |
| Ch. Sardar Mohammad Gill, B.Sc. (Agr.) (Pb.), Post Graduate, I.A.R.I. (New Delhi), <i>Assistant Professor of Agriculture</i> : arable crops.                    | 7            |
| Agha Ali Asghar Khan, B.Sc. (Agr.) (Pb.), Ph.D. (Wales), <i>Assistant Professor of Agricultural Economics</i> : economics (agr.)                                | 27           |
| Musahib-ud-din, M.Sc. (Agr.) (Pb.), <i>Assistant Professor of Horticulture</i> : horticulture.  | 9            |
| S. Asghar Ali Shah, B.Sc. (Agr.) (Pb.), Post Graduate, I.A.R.I. (New Delhi), <i>Assistant Agricultural Chemist</i> : plant chemistry.                           | 5            |
| S. Fateh Ali Shah, B.Sc. (Agr.) (Pb.), <i>Assistant Botanist (Cotton)</i> : plant breeding (cotton).  | 4            |
| Ch. Mohammad Afzal, B.Sc. (Agr.) (Pb.), <i>Assistant Professor of Botany</i> : plant breeding.  | 4            |
| Abdul Wahab, M.Sc., <i>Assistant Professor of Chemistry</i> : plant chemistry.  | 5            |
| Abdul Wahid Khan, M.Sc. (Agr.) (Pb.), <i>Assistant Entomologist. (Plant Protection)</i> : entomology (plant protection).  | 19           |
| Dr. Abdul Hafiz, M.Sc. (Agr.) (Pb.), Ph.D. (Pb.), Ph.D., D.I.C. (Lond.), <i>Assistant Professor of Botany</i> : plant breeding.                                 | 4            |
| N. A. Makhdoom, M.Sc. (Horti.) (Arizona) (U.S.A.), <i>Fruit Specialist</i> : horticulture.  | 9            |
| A. G. Phillips, B.Sc. (Agr.) (Pb.), <i>Assistant Fruit Specialist</i> : horticulture.   | 9            |
| Ch. Jamal-ud-din, B.Sc. (Agr.) (Pb.), Assoc. I.A.R.I. (New Delhi), <i>Assistant Botanist (Rice)</i> : plant breeding (rice).                                    | 4            |
| M. Fazal-ud-din, B.Sc. (Agr.) (Pb.) Post Graduate, I.A.R.I. (New Delhi), <i>Assistant Agricultural Bacteriologist</i> : bacteriology (agriculture).             | 22           |
| Ch. Sultan Ali, B.Sc. (Agr.) (Pb.), <i>Assistant Professor of Entomology</i> : entomology.  | 19           |
| M. Abdul Karim Bhatti, B.A. (Mathematics), <i>Statistician</i> : statistics.  | 29           |
| Majid Hassan Khan, B.Sc. (Albd.), B.Sc. (Agr. Engineering) (Albd.), M.Sc. (Agr. Engineering) (Wise, U.S.A.), <i>Agricultural Engineer</i> : engineering (agr.). | 28           |
| S. M. Rafiq, A.M.I.S.E. (Lond.), <i>Section ACDE, SDO Boring</i> : engineering (well boring).   | 28           |

## Department of Animal Husbandry

### Montgomery

- S. I. A. Shah, M.R.C.V.S., *Deputy Director, Animal Husbandry* 14, 15, 17  
*(Livestock Breeding)* : animal breeding ; animal nutrition ;  
 animal production, including dairying.

M. M. Sarwar, L.V.P., *Helminthologist*, Sheikhpura : helminthology.

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WEST PUNJAB VETERINARY COLLEGE, Lahore.

S. M. Sarwar, M.R.C.V.S., *Principal* : animal husbandry. 18

W. M. Khan, M.R.C.V.S., *Professor of Physiology* : physiology. 13

Ch. Mohammad Yaqub, B.V.Sc., *Professor of Parasitology* : pathology ; bacteriology ; entomology. 16, 19, 22

S. A. Chaudhri, M.R.C.V.S., *Professor of Anatomy* : anatomy. 13

SIND

Department of Agriculture

R. S. B. B. Desai, M.Agr. (Bom.), *Deputy Director of Agriculture*, Sind, Hyderabad ; plant breeding. 4

A. R. Akhtar, M.Sc. (Hons.), Assoc. A.I.I.Sc., *Cotton Botanist*, Mirpurkhas, Sind : plant breeding ; production of long staple cotton. 4

H. K. Mughal, B.Sc. (Agr.) (Hons.), Assoc. I.D.R.I. (Benglore), *Livestock Officer*, Sind, Malir : animal breeding ; animal nutrition ; animal husbandry. 14, 15, 18

K. F. Ahmed, *Agricultural Engineer*, Sind, Hyderabad : engineering. 28

Gobind Ram N. Shahani, B.Sc. (Agr.), *Divisional Superintendent of Agriculture*, North Sind, Sukkur : plant breeding. 4

Abdul Rahman M. Memon, B.Sc. (Agr.), Assoc. I.A.R.I. (New Delhi), *Assistant Cotton Breeder*, Sind, Mirpurkhas : plant breeding ; breeding of short staple (desi) and medium staple (American) cottons. 4

Dr. Ahmed Khan, B.Sc. (Agr.), Ph.D. (Wales) in Agr. and Economics, F.S.S., *Deputy Director of Agriculture*, Sind, Larkana : agronomy ; economics. 27

A. M. Mustafa, M.B.E., M.A. (Oxon.), Dip. Rural Econ. (Oxford.), Bar-at-Law, *Director of Agriculture*, Sind Karachi. 1

KING GEORGE V INSTITUTE OF AGRICULTURE,  
Sakrand, Sind.

Dr. A. M. Shaikh, M.Sc. (Bom.), Ph.D. (Lond.), D. I.C., A.I.C., 2, 5, 24, 25  
*Agricultural Chemist and Soil Physicist, Professor of Chemistry and Principal* : soils ; fertilizers ; plant nutrition ; plant chemistry ; general chemistry, and bio-chemistry.

A. R. Pirzada, M.Sc., *Botanist, Professor of Botany and Vice-Principal* : general botany and plant physiology ; plant breeding. 3, 4

H. G. Chagla, M.Sc. (Ore.) (U.S.A.), F.R.H.S. (Lond.), *Agriculturist and Professor of Agriculture* : arable crops ; grassland herbage and fodder plants ; climatology. 7, 8, 26

M. Haroon Khan, B.Sc. (Lond.), A.R.C.S. (Lond.), *Entomologist and Professor of Entomology* : entomology. 19

A. R. Arain, B.Agr. (Bom.), C.H.D. (Manchester), M.Sc. (U.S.A.), *Professor of Agricultural Economics* : economics. 27



- K. G. Rajper, B.Sc. (Hons.) in Agriculture, I.I.F. Technology (Dip.), *Assistant Professor of Horticulture*: horticulture. 9
- Mohammad Amin Bhatti, B.Agr. (Bomb.), Dip. I.D.R.I., *Assistant Professor of Animal Husbandry and Dairying*: animal breeding; animal nutrition; animal husbandry. 14, 15, 18
- A. S. Fatmi, M.Sc. (Agra.), Assoc. I.A.R.I. (New Delhi), *Assistant Professor of Mycology*: plant pathology; mycology; bacteriology viruses and related immunology. 6, 20, 22

#### RESEARCH STATIONS AND FARMS

- Mohammad Rafik M. Siddiki, M.Sc. (Bom.), *Agricultural Chemist and Soil Physicist, Officer-in-Charge, Research Station, Dokri, Sind*: soils; fertilizers; plant nutrition. 2
- A. G. Pirzada, B.Agr. (Bom.), Post Graduate training in horticultural technology, *Horticulturist, Government Fruit Farms, Mirpurkhas, Sind*: horticulture (technology). 9
- A. K. Khan Lodhi, B.Agr. (Bom.), *Development Officer, Pai Forest Farm, Sakrand, Sind*: development of improved seeds multiplication work (research and extension). 1

#### Department of Forests

- Abdullah R. Arain, M.Sc., *Utilization Research Officer, Department of Forests, Sind, Hyderabad*: forest products (major and minor) and utilization:—research to improve utilization efficiency in all products and to collect statistics of their present uses, quantity consumed and source of supply. 11
- Moin Alam Qadri, B.Sc., and Superior Forest Service Course. Training at Dehra Dun for 18 months (1946-48), *Silviculturist, Department of Forests, Sind, Hyderabad*: forestry—silviculture and management; preparation of yield and volume tables of babul; experimental sowing of exotics, their rate of growth, etc.; to investigate factors affecting the growth of tree crops in irrigated plantations and to ascertain the annual rates of production of wood and the requirement of water. 10

#### Department of Veterinary Services

Karachi.

- M. Mohey Din, M.R.C.V.S., *Director Veterinary Services*: liver fluke and contagious pleuro pneumonia. 18
- Mohd Bux, G.B.V.C., *Officer in Charge Veterinary Laboratory*: collecting statistics of some diseases in Sind. 18
- I. Y. Sheikh, G.B.V.C., *Assistant Veterinary Investigation Officer (Poultry) and P.G. (Poultry Science)*: diseases in poultry. 18

#### BALUCHISTAN

#### Department of Agriculture

Quetta

- Dr. Abdul Aziz Khan, B.Sc. (Agr.) (Pb.), Ph.D. (Hort.) (Bristol), *Director of Agriculture*: horticulture (fruit growing, fruit and vegetable preservation). 9

## PAKISTAN

|   | Subject |
|---|---------|
| R. Zarbakht Khan, B.Sc. (Agr.) (Edin.), C.D.A. (Wye), <i>Deputy Director of Agriculture</i> : agronomy.   | 1       |
| Dr. Nazeer Ahmed Janjua, M.Sc. (Zoology), Ph.D., Faculty of Science (Entomology), <i>Entomologist</i> : entomology.   | 19      |
| Mohammad Asghar Giani, M.Sc. (Hons.). One year post graduate training at College of Agriculture, University of California (U.S.A.), <i>Horticulturist</i> : horticulture. | 9       |
| Malik Said Ahmed, M.Sc. (Hons.) in Botany, <i>Mycologist</i> : mycology.  | 20      |

### Department of Forests

Quetta

|  |    |
|--|----|
| Ghaus Mohammad Khattak, B.Sc., A.P.F.S., <i>Forest Working Plan Officer</i> : silviculture and management. | 10 |
|--|----|

### Department of Animal Husbandry

Quetta

|  |       |
|--|-------|
| K. S. Dr. Mohammad Ramzan Khan, B.A. (Punjab), Graduate Punjab Veterinary College, Post Graduate Punjab Veterinary College, <i>Deputy Director of Animal Husbandry</i> : animal husbandry. | 1, 18 |
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## NORTH-WEST FRONTIER PROVINCE

### Department of Agriculture

Peshawar

|  |              |
|--|--------------|
| S. Mohd. Ibrahim Shah, M.Sc. (Utah) (U.S.A.), M.Sc. (Bristol), <i>Director of Agriculture</i> , Tarnab Farm.   | 1            |
| M. Fazlur Rahim Khan, M.Sc. (Alig.), M.Sc. (Calif.), M.Sc. (Minn.), M.A.S.H. (U.S.A.), F.R.H.S. (Eng.), <i>Horticulturist</i> , Tarnab Farm : horticulture and plant breeding. | 4, 9         |
| Abdul Halim Khan, L.C., <i>Assistant Director of Agriculture</i> , Peshawar : superintendence of district work.  | 1            |
| Mohammad Said Khan, B.Sc. (Agr.), <i>Assistant Director of Agriculture</i> , Dera Ismail Khan : superintendence of district work.  | 1            |
| Mohammad Solyman, B.Sc. (Agr.), Assoc. I.A.R.I., <i>Economic Botanist</i> , Tarnab Farm : general botany.  | 3            |
| Abdul Aziz, B.Sc., Assoc. I.A.R.I., <i>Agricultural Chemist</i> , Tarnab Farm : soils ; fertilizers ; plant nutrition ; plant chemistry ; general chemistry and bio-chemistry. | 2, 5, 24, 25 |
| Abdul Hamid Khan, B.Sc. (Agr.), <i>Assistant Director of Agriculture</i> , Kurram (Parachinar) : superintendence of agency work and research in general and plant protection.  | 1            |
| Mian Obedullah Jan, B.Sc. (Agr.), Assoc. I.A.R.I., <i>Sugarcane Specialist</i> , Tarnab Farm : research in sugarcane and plant breeding.                                       | 4            |
| Fazal Dad Khan, B.Sc. (Agr.), <i>Entomologist</i> , Tarnab Farm : entomology.  | 10           |
| Mohammad Sarwar Khan, B.Sc. (Agr.), Assoc. I.A.R.I., <i>Mycologist</i> , Tarnab Farm : mycology.   | 20           |
| Faqir Hussain, B.Sc. (Agr.), <i>Assistant Director of Agriculture</i> , Hari-pur : superintendence of district work.   | 1            |

|  |               |
|--|---------------|
| M. S. Roghani, B.Sc. (Agr.), M.Sc. (Orign.), H.P. (Pb.), <i>Fruit Technologist</i> , Tarnab Farm : preservation and transport. | Subject<br>30 |
| Mohammad Rashid, M.Sc., <i>Entomologist. In Charge Codling Moth Scheme</i> , Parachinar : plant protection.                    | 4             |

## EAST BENGAL

## Department of Agriculture

|   |   |
|---|---|
| Dacca   |   |
| Khan Bahadur Dr. S. Hedayatullah, M.Sc. (Cal.), Ph.D. (Lond.), <i>Director of Agriculture</i> , Ramna, Dacca.                   | 1 |
| K. S. F. I. Waheed, B.A. (Cal.), <i>Deputy Director of Agriculture</i> , Rajshahi.  | 1 |
| K. S. Mohammad Hussain Ali, C.C.A., <i>Deputy Director of Agriculture</i> , Sylhet.   | 1 |
| A. M. Ahmed, B.Sc. (Agr.), Dip. Agr. (Cantab.), <i>Deputy Director of Agriculture</i> , Chittagong.                             | 1 |
| A. M. Chaudhry, B.Sc. (Agr.), <i>Deputy Director of Agriculture</i> , Barisal.  | 1 |
| Moinuddin Ahmed, C.C.A., <i>Chief Superintendent</i> , Dacca Farms, Dacca : superintendence of farms.                           | 1 |
| Mohammad Ayub Ali Majumdar, C.C.A., <i>Superintendent of Agriculture</i> , Rajshahi : superintendence of agriculture.,          | 1 |
| Sadul Huq, C.C.A., <i>Superintendent of Agriculture</i> , Sylhet : superintendence of agriculture.                              | 1 |
| Syed Modessir Ali, B.Agr., Assoc. I.A.R.I., <i>Superintendent of Agriculture</i> , Chittagong : superintendence of agriculture. | 1 |
| Abdul Halim, B.Sc., B.Agr., <i>Superintendent of Agriculture</i> , Barisal: superintendence of agriculture.                     | 1 |
| Mozammil Huq, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Dacca: supervision of district work.                        | 1 |
| D. H. Ahmed, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Mymensingh : supervision of district work.                   | 1 |
| S. S. Islam, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Jamalpur (Mymensingh) : supervision of district work.        | 1 |
| Abdul Huq, B.Sc. (Agr.), <i>District Agricultural Officer</i> , Sylhet : supervision of district work.                          | 1 |
| Zahirul Huq Khan, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Faridpur : supervision of district work.                | 1 |
| Mansur Ahmed Sarkar, B.Sc. (Agr.), <i>District Agricultural Officer</i> , Barisal : supervision of district work.               | 1 |
| Abdul Huq Bhuiyan, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Khulna : supervision of district work.                 | 1 |
| Syeduddin Ahmed, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Jessore : supervision of district work.                  | 1 |
| Mohammad Lutful Huq, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Comilla : supervision of district work.              | 1 |
| Mansur Ahmed, B.Sc. (Agr.), <i>District Agricultural Officer</i> , Noakhali : supervision of district work.                     | 1 |
| A. N. Safuddin Ahmed, B.Sc., B.Agr., <i>District Agricultural Officer</i> , Chittagong : supervision of district work.          | 1 |



|  |   |
|--|---|
| Naziruddin Ahmed, B.Sc., B.Agr., <i>District Agricultural Officer, Rangamati</i> : supervision of district work.       | 1 |
| Shamsul Huq, B.Sc., B.Agr., <i>District Agricultural Officer, Rajshahi</i> : supervision of district work.             | 1 |
| Sirajul Islam Barbhuiyan, B.Sc., B.Agr., <i>District Agricultural Officer, Kushtia</i> : supervision of district work. | 1 |
| Mullah Shamsuddin Ahmed, B.Sc., B.Agr., <i>District Agricultural Officer, Pabna</i> : supervision of district work.    | 1 |
| Faizuddin Ahmed, B.Sc., B.Agr., <i>District Agricultural Officer, Bogra</i> : supervision of district work.            | 1 |
| Abdus Samad, B.Sc., B.Agr., <i>District Agricultural Officer, Rangpur</i> : supervision of district work.              | 1 |
| Abdus Sattar, B.Sc., B.Agr., <i>District Agricultural Officer, Dinajpur</i> : supervision of district work.            | 1 |
| Abdul Wahab, B.Sc., B.Agr., <i>District Agricultural Officer, Naogaon (Rajshahi)</i> : supervision of district work.   | 1 |

## CHEMICAL SECTION, Dacca.

|  |   |
|--|---|
| Dr. Mohammad Sulaiman, M.Sc., Ph.D., <i>Agricultural Chemist</i> : plant chemistry.    | 5 |
| Mohammad Abdul Quader, M.Sc., <i>Assistant Agricultural Chemist</i> : plant chemistry. | 5 |
| A. M. Masud, M.Sc., <i>Physical Chemist</i> : plant chemistry.                         | 5 |
| Wahidul Islam, M.Sc., <i>Research Assistant</i> : plant chemistry.                     | 5 |
| A. K. M. Fazal Huq, M.Sc., <i>Research Assistant</i> : plant chemistry.                | 5 |
| B. I. Nurunnabi, M.Sc., <i>Research Assistant</i> : plant chemistry.                   | 5 |
| Sarawar Jan Bhuiyan, M.Sc., <i>Research Assistant</i> : plant chemistry.               | 5 |
| Abdul Batan Khan, B.Sc., B.Agr., <i>Research Assistant</i> : plant chemistry.          | 5 |
| Hafizur Rahman, M.Sc., <i>Research Assistant</i> : plant chemistry.                    | 5 |
| H. R. Malik, B.Sc., B.Agr., <i>Research Assistant</i> : plant chemistry.               | 5 |
| Riyazuddin Taluqdar, B.Sc., B.Agr., <i>Research Assistant</i> : plant chemistry.       | 5 |
| Jalaluddin Taluqdar, B.Sc., B.Agr., <i>Research Assistant</i> : plant chemistry.       | 5 |
| Musharraf Hussain, B.Sc., B.Agr., <i>Research Assistant</i> : plant chemistry.         | 5 |
| Alauddin Ahmed, B.Sc., B.Agr., <i>Research Assistant</i> : plant chemistry.            | 5 |

## BIO-CHEMICAL SECTION, Rajshahi.

|   |    |
|---|----|
| Abdul Qadir, B.Sc., <i>Assistant Bio-Chemist, Dacca</i> : bio-chemistry.    | 25 |
| Najmul Huda, B.Sc., <i>Assistant Bio-Chemist, Rajshahi</i> : bio-chemistry. | 25 |

## BOTANICAL SECTION (CEREAL), Dacca.

|  |   |
|--|---|
| Imdad-ul-Huq Khan, M.Sc. (Alig.), B.Agr., M.S. (U.S.A.), <i>Economic Botanist (Cereal)</i> : general botany. | 3 |
| Ghulam Yazdani, B.Sc. (Agr.), Assoc. I.A.R.I., <i>Assistant Economic Botanist (Cereal)</i> : general botany. | 3 |
| J. L. Sen, B.Agr., <i>Botanical Assistant</i> : general botany.  | 3 |

|   | Subject |
|---|---------|
| Abdul Huq, M.Sc. (Alig.), <i>Botanical Assistant</i> : general botany.  | 3       |
| Afazuddin Ahmed, B.Sc., <i>Botanical Assistant</i> : general botany.  | 3       |
| Shah Husan-uz-Zaman, B.Sc., B.Agr., <i>Botanical Assistant</i> : general botany.                                  | 3       |
| BOTANICAL SECTION (FIBRE), Dacca  |         |
| Dr. S. D. Chaudhry, Ph.D. (Lond.), <i>Economic Botanist (Fibre)</i> : general botany.                             | 3       |
| Dr. A. Alim, M.Sc., Assoc. I.A.R.I., Ph.D. (U.S.A.), <i>Assistant Economic Botanist (Fibre)</i> : general botany. | 3       |
| Najmul Huda, B.Sc. (Agr.), <i>Botanical Assistant</i> : general botany.   | 3       |
| Aminul Islam, B.Sc., <i>Botanical Assistant</i> : general botany.   | 3       |
| Mazharul Islam, B.Sc. (Agr.), <i>Botanical Assistant</i> : general botany.  | 3       |
| Abdus Sattar, B.Sc., B.Agr., <i>Botanical Assistant</i> : general botany.   | 3       |
| ENTOMOLOGICAL SECTION, Dacca  |         |
| S. H. Hazarika, M.Sc., M.S. (U.S.A.), <i>Entomologist</i> : entomology.   | 19      |
| Mohammad Sirajul Huq, B.Sc., B.Agr., <i>Assistant Entomologist</i> : entomology.                                  | 19      |
| Chitsagar Datta, B.Sc. (Agr.), <i>Entomological Assistant</i> : entomology.                                       | 19      |
| Zahirul Islam, B.Sc., B.Agr., <i>Entomological Assistant</i> : entomology.  | 19      |
| Misbahuddin, B.Sc., B.Agr., <i>Entomological Assistant</i> : entomology.  | 19      |
| MYCOLOGICAL SECTION, Dacca.   |         |
| A. H. M. A. Halim, B.Sc., B.Agr., <i>Mycological Assistant</i> : mycology.  | 20      |
| K. M. Badruddusa, B.Sc., B.Agr., <i>Mycological Assistant</i> : mycology.   | 20      |
| Abdul Aziz, B.Agr., <i>Mycological Assistant</i> : mycology.  | 20      |
| ENGINEERING SECTION, Dacca.   |         |
| S. M. Najmul Huq, B.E. (Cal.), M.S. (U.S.A.), <i>Agricultural Engineer</i> : engineering.                         | 28      |
| Mazharul Huq, B.Sc., B.Agr., <i>Assistant Agricultural Engineer</i> : engineering.                                | 28      |
| STATISTICAL SECTION, Dacca.   |         |
| Mohammad Abdul Hakim, M.Sc. (Statistics), <i>Statistical Officer</i> : statistics.                                | 29      |
| Mohammad Musharraf Hussain, B.Sc., <i>Statistical Assistant</i> : statistics.                                     | 29      |
| EAST BENGAL AGRICULTURAL INSTITUTE, Dacca   |         |
| Fariduddin Ahmed, M.A. (Agr.), M.Sc. (Botany), M.S. (Horticulture) (U.S.A.), <i>Principal</i> .                   | 3, 9    |
| Raqibuddin Ahmed, M.A., <i>Professor of Agricultural Economics</i> : economics.                                   | 27      |
| S. Moshahid Ali, B.Sc., I.D.D., <i>Superintendent of Agriculture (Livestock)</i> .                                | 3       |
| A. S. M. Kamaluddin, B.Sc., B.Agr., <i>Botanist</i> : general botany.   | 3       |
| M. R. Taluqdar, B.Sc. (Agr.), M.S. (U.S.A.), <i>Agronomist</i> : agronomy.  | 1       |

|  | Subject |
|--|---------|
| S. B. Shahed, B.Sc. (Agr.), M.S. (U.S.A.), <i>Agronomist</i> : agronomy.                 | 1       |
| Amir Hussain, M.Sc., <i>Professor of Micro-Biology</i> : micro-biology.                  | 22      |
| S. A. Khan, B.Agr., Dip. Agr. (Cantab.), <i>Professor of Agronomy</i> : agronomy.        | 1       |
| Amiruddin Ahmed, B.Sc., B.Agr., <i>Bacteriological Assistant</i> : bacteriology.         | 22      |
| Mohammad Siddiquir Rahman, M.A., <i>Assistant to Agricultural Economist</i> : economics. | 27      |
| Moslehuddin, B.Agr., <i>Agronomical Assistant</i> : agronomy.                            | 27      |
| Akbar Hussain, B.Sc., B.Agr., <i>Mycological Assistant</i> : mycology.                   | 20      |
| A. T. M. Wahid, B.Sc., B.Agr., <i>Entomological Assistant</i> : entomology.              | 19      |

## Department of Forests

### Dacca

|   |        |
|---|--------|
| Y. S. Ahmed, M.A. (Cantab.), I.F.S., <i>Conservator of Forests</i> .  | 1      |
| O. Ghani, M.Sc., E.B.S.F.S., <i>Divisional Forest Officer</i> , Working Plans Division, Chittagong (East Bengal) : management of virgin forests of mixed deciduous type in the tropical forests of East Pakistan.   | 10     |
| N. Ahmed, B.Sc., E.B.S.F.S., <i>Divisional Forest Officer</i> , Utilization and Research Division, Chittagong (East Bengal) : utilization of various indigenous hard woods and tapping of dipterocarpus species for oil, the yield of oil from trees of different sizes and species and the effect of tapping on the strength and properties of the timber. | 10, 11 |

## Department of Animal Husbandry

|  |            |
|--|------------|
| Syed Mahmud Ali, B.Sc., M.R.C.V.S., <i>Director of Animal Husbandry</i> , Comilla : animal breeding ; animal nutrition ; bacteriology ; viruses and related immunology.  | 14, 15, 22 |
| Nisar Ahmed Khan, B.Sc., M.Sc. (Animal Husbandry) (U.S.A.), <i>Deputy Director (Production)</i> , Dacca : animal breeding ; animal production.   | 14, 17     |
| Abdul Hye, M.Sc., <i>Physiological Chemist</i> , Dacca : animal nutrition.   | 15         |
| Mohd Yunus, M.Sc., <i>Whey Officer</i> , Dacca : animal production, including dairying.  | 17         |
| Syed Mohammed Ali, B.Sc., M.R.C.V.S., <i>Principal</i> , <i>Eastern Pakistan Veterinary College</i> , Comilla : bacteriology ; viruses and related immunology.   | 22         |
| Mohd Akhtar Hussain, G.V.Sc., P.G. (Mukteshwar) P.G. (Eng.), <i>Superintendent, Veterinary Research Institute</i> , Comilla : bacteriology ; viruses and related immunology.   | 22         |
| Mohammed Naseem, G.V.Sc., M.Sc. (U.S.A.), <i>Lecturer</i> , <i>Eastern Pakistan Veterinary College</i> , Comilla : animal breeding.  | 14         |
| Ruhul Amin, G.V.Sc., P.G. (Mukteshwar), <i>Officer-in-Charge</i> , <i>Poultry Vaccine Institute</i> , Comilla : bacteriology ; viruses and related immunology.   | 22         |
| Dr. Emdadul Huq, G.V.Sc., M.Sc., Ph.D. (Animal Husbandry) (U.S.A.), <i>Superintendent, Animal Husbandry, Goat and Poultry Development</i> , Dacca : animal breeding : animal nutrition (poultry as the special subject). | 14, 17     |



# CEYLON

## DEPARTMENT OF AGRICULTURE

Peradeniya. (Tel. : Per. 221).

|  | Subject |
|--|---------|
| D. Rhind, O.B.E., B.Sc., F.L.S., <i>Director of Agriculture.</i>   | 1       |
| A. W. R. Joachim, M.B.E., Ph.D., B.Sc. (Lond.), F.I.C., Dip. Agric. (Cantab.), <i>Deputy Director of Agriculture.</i>  | 1       |
| T. M. Z. Mahamooth, M.R.C.V.S., <i>Deputy Director (Animal Husbandry) and Government Veterinary Surgeon.</i>   | 1       |
| B. A. Baptist, B.A., Ph.D. (Cantab.), B.Sc. (Lond.), <i>Entomologist : general entomological investigations.</i>   | 19      |
| M. F. Chandraratna, Ph.D., B.Sc. (Lond.), D.I.C., <i>Botanist : plant breeding and agronomic investigations.</i>   | 3, 4    |
| C. N. E. J. de Mel, B.Sc. (Lond.), B.Sc. (Agr.), Dip.Agr. (Wye), <i>Principal, Farm School, Peradeniya.</i>  | 1       |
| D. E. V. Koch, Ph.D., B.Sc. (Lond.), D.I.C., <i>Chemist,</i>   | 2, 5    |
| J. W. L. Pieris, B.Sc., Ph.D. (Lond.), D.I.C., <i>Plant Pathologist.</i>   | 6       |
| P. G. Malkani, B.A. (Hons.) (Bombay), B.Sc. (Vet.) (Lond.) M.R.C.V.S., <i>Specialist in Animal Husbandry (Disease side) : investigations on animal husbandry and diseases.</i> | 16, 18  |
| D. M. Ratnatunga, B.Sc., (Engineering), A.M.I.C.E., A.M.I.Mech.E., A.M.I.E.E., A.M.I.A.E., A.F.R.Ae.S., M.S.A.E., M.A.S.A.E., <i>Agricultural Engineer.</i>                    | 28      |
| G. V. Wickremesekera, A.I.C.T.A., Dip.Agr. (Poona), <i>Agricultural Research Officer : plant breeding and agronomic investigations.</i>  | 4       |
| A. V. Richards, B.Sc. (Calif.), B.Sc. (Lond.), Dip.Agr. (Cantab.), A.I.C.T.A. (Trinidad), <i>Horticultural Officer : investigations regarding horticulture.</i>                | 9       |
| L. H. Fernando, B.Sc. (Lond.), <i>Agricultural Research Officer.</i>   | 4       |
| E. F. L. Abeyratne, B.Sc. (Lond.), <i>Agricultural Research Officer.</i>   | 4       |
| D. V. Ariyanayagam, B.Sc. (Lond.), <i>Agricultural Research Officer.</i>   | 4       |

## FOREST DEPARTMENT

Colombo

|   |        |
|---|--------|
| H. E. C. Lushington, Dip. For. (Edinburgh), <i>Conservator of Forests.</i> (Tel. : 5074).   | 20     |
| Col. C. P. Jayawardena, O.B.E. (Mil. Div.), E.D., M.A. (Oxon.), F.L.S., Dip. For., <i>Senior Assistant Conservator of Forests.</i> (Tel. : 4739).   | 11, 30 |
| J. A. de Silva, B.A., Dip. For. (Oxon.), <i>Senior Assistant Conservator of Forests.</i>  | 10     |
| C. H. Holmes, B.A. (Cantab.), B.Sc. (Gen. and Sp.) (Lond.), Dip. For. (Oxon. and Cantab.), <i>Senior Assistant Conservator of Forests : silvicultural research and timber technology.</i> | 10, 26 |
| W. W. J. Mendis, B.Sc. (Ceylon), <i>Technical Assistant : botanical and statistical work connected with silvicultural research.</i>   | 29     |

## RUBBER RESEARCH SCHEME

|  |   |
|--|---|
| Dartonfield, Agalawatta. (Tel. : Aga. 66).   |   |
| Ernest Phillis, D.Sc., Ph.D. (Leeds), <i>Director</i> .  | 1   |
| H. E. Young, D.Sc. (Agr.) (Queensland), <i>Oidium Research Officer</i> : problems relating to <i>Oidium Heveae</i> .                   | 20  |
| C. A. de Silva, B.Sc. (Agr.) (Lond.), C.D.A. (Wye), <i>Botanist</i> : genetical and botanical work in relation to the rubber industry. | 3   |
| D. M. Fernando, B.Sc. (Ceylon), <i>Research Assistant</i> : botanical work in relation to the rubber industry.                         | 3   |
| M. S. Wijeratne, B.Sc. (Ceylon), <i>Research Assistant</i> : chemical work relating to the rubber industry.                            | 5   |
| In London (Jointly with Malaya)  |   |
| G. Martin, B.Sc., A.R.I.C., F.I.R.I.   | } <i>Chemist</i> : technological problems in relation to rubber industry. |
| H. C. Baker, M.Sc., A.R.I.C., A.I.R.I.   |   |
| W. G. Wren, B.Sc., A.R.C.S.  |   |

## TEA RESEARCH INSTITUTE

|  |        |
|--|--------|
| St. Coombs, Talawakelle.   |        |
| R. V. Norris, D.Sc. (Lond.), M.Sc. (Manc.), F.R.I.C., <i>Director</i> .  | 1      |
| C. A. Loos, <i>Assistant Pathologist</i> : plant parasitic and free-living nematodes.  | 20, 21 |
| G. B. Portsmouth, B.Sc., A.R.C.S., D.I.C., <i>Plant Physiologist</i> : plant physiological problems in relation to the tea industry. | 3, 4   |
| J. Lamb, M.Sc. (Lond.), A.I.C., A.I.C.T.A., <i>Biochemist</i> : problems connected with the manufacture of tea.                      | 25     |

## COCONUT RESEARCH SCHEME

|   |           |
|---|-----------|
| Bandirippuwa Estate, Lunuwila. (Tel. : Dankotuwa 95. 'Grams : Cocos-Negombo.)   |           |
| F. C. Cooke, B.Sc. (Lond.), A.R.C.Sc., A.M.I.Chem.E., <i>Director</i> .   | 1, 28, 30 |
| M. L. M. Salgado, Ph.D. (Cantab.), B.Sc. (Lond.), Dip. Agric. (Cantab.), <i>Soil Chemist</i> : soil and manurial problems relating to the coconut industry ; effect of cover crops and cultivation on the coconut palm ; pasture studies. | 2, 8      |
| W. R. N. Nathanael, B.Sc. (Lond.), <i>Acting Technological Chemist</i> : technological problems relating to the coconut industry, and the chemistry of oils and fats.   | 5, 24     |
| D. V. Liyanage, B.Sc. (Lond.), <i>Acting Botanist</i> : botanical problems relating to the coconut palm ; breeding and selection.   | 3, 4      |

# SOUTHERN RHODESIA

## DIVISION OF AGRICULTURE AND LANDS

### Department of Agriculture

Subject

P.O. Box 25, Causeway, Salisbury.

|  |       |
|--|-------|
| A. E. Romyne, M.C., Ph.D., <i>Secretary for Agriculture and Lands.</i>                                 | 1, 18 |
| J. K. Chorley, F.R.E.S., <i>Director of Research and Specialist Services.</i>                          | 1, 19 |
| C. A. Murray, M.Sc. (Agr.), <i>Assistant Director of Research and Specialist Services (Extension).</i> | 1, 18 |

### ANIMAL HUSBANDRY

|  |            |
|--|------------|
| J. C. Raath, M.Sc. (Agr.), <i>Senior Animal Husbandry Officer.</i> | 14, 15, 17 |
| T. H. Vorster, M.Sc. (Agr.), <i>Animal Husbandry Officer.</i>      | 14, 15, 17 |
| C. A. Walker, Ph.D., <i>Animal Husbandry Officer.</i>              | 14, 17     |
| I. M. Krige, B.Sc. (Agr.), <i>Animal Husbandry Officer.</i>        | 15         |

### DAIRYING

|   |       |
|---|-------|
| J. R. Corry, B.Sc., <i>Chief Dairy Officer.</i> | 1, 17 |
| F. A. Lammas, Dip.Agr., <i>Dairy Officer.</i>   | 17    |
| R. E. Nicol, <i>Dairy Officer.</i>              | 17    |
| R. G. Jones, B.Sc., <i>Dairy Officer.</i>       | 17    |

### AGRICULTURE AND HORTICULTURE

|   |      |
|---|------|
| D. E. McLoughlin, Cert. Agr., <i>Chief Agriculturist.</i>   | 1, 7 |
| T. K. Sansom, B.Sc., <i>Senior Plant Breeder : wheat ; barley ; sorghums and maize.</i>                                     | 4, 7 |
| C. N. Hayter, Cert. Hort., F.I.P.A. (S.A.), <i>Senior Horticulturist : sub-tropical and deciduous fruit and vegetables.</i> | 9    |
| A. G. H. Rattray, B.A., <i>Agriculturist : hybrid maize ; legumes and arable crops.</i>                                     | 4, 7 |
| H. H. Roberts, B.Sc., <i>Agriculturist : arable crops.</i>  | 7    |

### CHEMISTRY

|   |  |          |
|---|--|----------|
| A. D. Husband, F.R.I.C., <i>Chief Chemist</i> : soil and fertiliser investigations. |  | 1, 2, 24 |
| B. S. Ellis, B.Sc., D.I.C., F.R.I.C.  | } <i>Chemists</i> : soils ; fertilizers<br>and farm foods. | 2, 24    |
| J. F. Duguid, M.A., B.Sc.   |  |          |
| R. G. Thomas, B.Sc., A.R.I.C.   |  |          |
| D. H. Saunder, M.Sc., Ph.D.   |  |          |
| I. McDonald, B.A., B.Sc., A.R.I.C.  |  |          |
| Miss E. G. Giffard, B.Sc.   |  |          |
| H. Weinmann, Dr. Agr., D.Sc., <i>Pasture Research Chemist</i> (seconded)            |  | 2, 15    |

### BOTANY AND PLANT PATHOLOGY

|   |         |
|---|---------|
| J. C. F. Hopkins, D.Sc. (Lond.), A.I.C.T.A., <i>Chief Botanist and Plant Pathologist : general botany ; tobacco and vegetable diseases ; seed potatoes.</i> | 1, 3, 6 |
| G. R. Bates, Ph.D. (Lond.), <i>Senior Plant Pathologist : tobacco and citrus diseases.</i>  | 6, 20   |
| E. A. Riley, B.Sc., D.I.C., <i>Plant Pathologist : tobacco diseases.</i>  | 6       |



# SOUTHERN RHODESIA

|  | Subject                                     |
|--|---|
| Jane G. Broadfoot, B.Sc. (Hons.), <i>Plant Pathologist</i> : general plant diseases. | 6   |
| H. Wild, Ph.D. (Lond.), D.I.C., <i>Botanist</i> : systematic botany ; weed control.  | 3, 12                                       |
| Kathleen S. Sturgeon, B.Sc., <i>Botanist</i> : systematic botany.                    | 3   |
| ENTOMOLOGY   |   |
| M. C. Mossop, A.F.C., M.Sc., <i>Chief Entomologist</i> .                             | 1, 19                                       |
| J. A. Whellan, B.Sc., <i>Entomologist</i> .  | 19  |
|  | tsetse fly and general economic entomology. |
| TOBACCO  |   |
| D. D. Brown, <i>Chief Tobacco Officer</i> .  | 1, 7  |
| J. C. Collins, B.Sc., <i>Tobacco Officer</i> : tobacco culture.                      | 7   |
| FORESTRY   |   |
| E. J. Kelly Edwards, M.A., Dip. For. (Oxon.), <i>Chief Conservator of Forests</i> .  | 1, 10, 11                                   |
| G. M. McGregor, B.Sc. (For.), <i>Assistant Chief Conservator of Forests</i> .        | 10, 11                                      |
| A. A. Pardy, B.Sc., B.Sc. (For.), <i>Conservator of Forests (Research)</i> .         | 10, 11                                      |
| J. S. Wilkins, B.Sc. (For.), <i>Conservator of Forests</i> .                         | 10, 11                                      |
| F. B. Armitage, B.Sc., B.A. (Hons.) (Oxon.)  |   |
| P. Banks, B.Sc. (For.)   |   |
| G. L. Guy, B.Sc. (For.)  |   |
| R. Hobbins, B.A. (Oxon.)   |   |
| L. M. Hodgson, M.Sc.   |   |
| R. H. Hunt, B.Sc. (For.)   |   |
| A. B. Jeffrey, B.Sc. (For.)  |   |
|  | Forest Officers. 10, 11                     |
| PASTURE RESEARCH   |   |
| R. R. Staples, M.A., Dip. Agr. (Cantab.), <i>Chief Pasture Research Officer</i> .    | 1, 8  |
| H. Weinmann, D.Sc., Dr. Agr., M.Sc., <i>Pasture Research Chemist</i> .               | 2, 15                                       |
| MATOPOS RESEARCH STATION, MATOPOS, BULAWAYO  |   |
| O. West, D.Sc., M.Sc., <i>Senior Pasture Research Officer in charge</i> .            | 8   |
| T. C. D. Kennan, B.Sc. (Agr.), <i>Pasture Research Officer</i> .                     | 8   |
| A. V. Oates, B.Sc., <i>Pasture Research Officer</i> .                                | 8   |
| D. C. H. Plowes, B.Sc., <i>Pasture Research Officer</i> .                            | 8   |
| PASTURE RESEARCH SUB-STATION, NYAMANDHLOU.   |   |
| K. B. Addison, <i>Pasture Research Officer</i> .                                     | 8   |
| GRASSLAND RESEARCH STATION, MARANDELLAS  |   |
| J. M. Rattray, M.Sc., <i>Senior Pasture Research Officer in Charge</i> .             | 8   |
| H. D. L. Corby, B.Sc., A.I.C.T.A. (Trinidad), <i>Pasture Research Officer</i> .      | 8   |
| C. K. Thompson, B.Sc. (Hons.), <i>Pasture Research Officer</i> .                     | 8   |
| W. B. Cleghorn, B.Sc., <i>Pasture Research Officer</i> .                             | 8   |

## HENDERSON RESEARCH STATION, MAZOE

- E. D. Bumpus, Ph.D., B.Sc., *Senior Pasture Research Officer in Charge.* 8

## TOBACCO RESEARCH STATION, TRELAWNEY, P.B, SALISBURY

- H. L. Pearse, Ph.D., D.I.C., *Senior Tobacco Research Officer in Charge.* 1, 3
- Capt. C. E. Lowe, Eng./Capt. R.N. retd., C.B.E., *Engineer.* 28
- R. A. C. Daulton, B.Sc., *Helminthologist.* 21
- H. J. H. Boyd, B.Sc., *Agronomist.* 7
- W. J. O'Neill, B.Agr.Sc., *Agronomist.* 7
- T. F. O'Callaghan, B.Agr.Sc., *Agronomist.* 7
- P. V. M. Richards, B.Sc., *Agronomist.* 7
- E. A. Riley, B.Sc., D.I.C., *Plant Pathologist (seconded).* 6

## TURKISH TOBACCO AND PLANT BREEDING STATION, P.B. 187 T., BULAWAYO.

- B. C. Akehurst, B.Sc., *Tobacco Officer in Charge.* 7

## CIGAR TOBACCO EXPERIMENT STATION, P.O., CHIPINGA.

- C. A. van Pernis, *Tobacco Officer, in Charge.* 7

**Irrigation Department**

P.O. Box 91, CAUSEWAY, SALISBURY.

- P. H. Haviland, B.Sc., M.I.C.E., *Director of Irrigation.* 1, 28
- R. H. Roberts, B.Sc., M.I.C.E., *Assistant Director of Irrigation* 1, 28
- J. H. R. Savory, B.Sc. (Eng.), *Circle Engineer, Bulawayo.* 28
- S. W. Loewenson, B.Sc. (Eng.), A.M.I.C.E., *Assistant Circle Engineer, Bulawayo.* 28
- J. E. White, A.M.I.C.E., *Circle Engineer, Salisbury.* 28
- I. H. R. Shand, B.Sc. (Eng.), *Assistant Circle Engineer, Salisbury.* 28
- W. Lawley, O.B.E., A.C.G.I., D.I.C., *Circle Engineer, Fort Victoria.* 28
- P. W. Kennedy, T.D., A.C.G.I., A.M.I.C.E., A.M.I.Mech.E., A.M.I.W.E., *Assistant Circle Engineer, Fort Victoria.* 28
- H. W. H. Wallis, B.Sc. (Eng.), A.M.I.C.E., *Hydrographic Engineer.* 28
- R. S. Duncan, O.B.E., B.Sc. (Eng.), A.M.I.C.E., *Designs Engineer.* 28
- H. L. Wells, B.Sc. (Eng.), *Chief Reconnaissance Engineer.* 28
- T. W. R. Easton, B.Sc. (Eng.), *Projects Engineer.* 28
- C. A. Anderson, A.M.I.Mech.E., *Chief Mechanical Engineer.* 28
- B. G. Gundry, M.B.E., A.I.Mech.E., *Agricultural Engineer.* 28

**Veterinary Department**

P.O. Box 12. CAUSEWAY, SALISBURY.

- P. D. Huston, M.R.C.V.S., *Director of Veterinary Services.* 1, 16
- J. S. Adamson, M.R.C.V.S., B.Sc., D.T.V.M., *Assistant Director of Veterinary Services : field.* 1, 16
- A. S. McChlery, M.R.C.V.S., *District Veterinary Officer.* 1, 16
- W. J. Nixon, M.R.C.V.S., *District Veterinary Officer.* 1, 16
- J. MacKinnon, M.R.C.V.S., *District Veterinary Officer.* 1, 16
- A. MacGilp, M.R.C.V.S., *District Veterinary Officer.* 1, 16

## SOUTHERN RHODESIA

|   | Subject |
|---|---------|
| H. K. Hesketh, M.R.C.V.S., <i>District Veterinary Officer.</i>                    | 1, 16   |
| T. Lees May, M.R.C.V.S., <i>District Veterinary Officer.</i>                      | 1, 16   |
| J. P. A. Morris, M.R.C.V.S., <i>Assistant Veterinary Officer.</i>                 | 1, 16   |
| A. E. Harrop, M.R.C.V.S., <i>Assistant Veterinary Officer.</i>                    | 1, 16   |
| J. Ross, M.R.C.V.S., <i>Assistant Veterinary Officer.</i>                         | 1, 16   |
| H. M. Hodkin, B.V.Sc., <i>Assistant Veterinary Officer.</i>                       | 1, 16   |
| T. Lithgow, M.R.C.V.S., <i>Assistant Veterinary Officer.</i>                      | 1, 16   |
| A. E. Gillespie, M.R.C.V.S., <i>Assistant Veterinary Officer.</i>                 | 1, 16   |
| J. H. Darbyshire, M.R.C.V.S., B.Sc. (Lond.), <i>Assistant Veterinary Officer.</i> | 1, 16   |

### Veterinary Research Department

P.O. Box 101, CAUSEWAY, SALISBURY.

|   |       |
|---|-------|
| D. A. Lawrence, B.V.Sc., <i>Assistant Director of Veterinary Services (Research).</i> | 1, 16 |
| J. M. Williamson, M.R.C.V.S., B.Sc., <i>Veterinary Research Officer.</i>              | 16    |

## DIVISION OF MINES AND TRANSPORT

### Meteorological Department

P.O. Box. 66, CAUSEWAY, SALISBURY.

|   |       |
|---|-------|
| N. P. Sellick, B.Sc., B.Sc. (Eng.), <i>Director of Meteorological Services.</i> | 1, 26 |
| J. S. Peake, B.Sc., <i>Senior Meteorologist.</i>                                | 26    |



# COLONIAL TERRITORIES

## COLONIAL OFFICE, LONDON

|  | Subject |
|--|---------|
| G. F. Clay, C.M.G., O.B.E., M.C., B.Sc., N.D.A., N.D.D. (Hons.),<br><i>Agricultural Adviser.</i> | 1       |
| G. W. Nye, O.B.E., B.Sc. (Agr.), <i>Deputy Agricultural Adviser.</i>                             | 1       |
| L. Lord, M.A., <i>Assistant Agricultural Adviser.</i>  | 1       |
| R. J. Simmons, C.B.E., M.R.C.V.S., <i>Adviser on Animal Health.</i>                              | 1       |
| G. A. C. Herklots, M.Sc., Ph.D., F.L.S., <i>Secretary for Colonial Agricultural Research.</i>    | 1       |
| W. A. Robertson, <i>Forestry Adviser.</i>  | 1       |
| C. B. Symes, O.B.E., in charge of research (Colonial Insecticides Committee).                    | 1       |
| W. A. Allan, M.R.C.V.S., D.T.V.M., <i>Assistant Adviser on Animal Health.</i>                    | 1       |

## COLONIAL INSECTICIDES RESEARCH UNIT (COLONIAL INSECTICIDES COMMITTEE)

Headquarters : Arusha, Tanganyika.

|  |    |
|--|----|
| K. S. Hocking, B.Sc., <i>Entomologist-in-charge.</i> | 19 |
| H. C. M. Parr, B.Sc., <i>Entomologist.</i>           | 19 |
| P. A. Robins, Ph.D., <i>Chemist.</i>                 | 24 |
| P. R. Wilkinson, M.A., <i>Entomologist.</i>          | 19 |
| D. A. Yeo, B.Sc., <i>Physicist.</i>                  | 19 |
| R. E. Rapley, <i>Laboratory Technician.</i>          | 24 |
| E. T. Mesmer, <i>Laboratory Assistant.</i>           | 19 |
| G. C. Dauber, <i>Senior Field Executive Officer.</i> | 19 |
| K. E. Woodcock, <i>Field Officer.</i>                | 19 |
| R. C. Sell, <i>Field Officer.</i>                    | 19 |
| J. Macfarlane, <i>Field Officer.</i>                 | 19 |
| D. G. Anstey, <i>Field Officer.</i>                  | 19 |
| T. R. Jones, <i>Field Officer.</i>                   | 19 |

## COLONIAL INSECTICIDE RESEARCH LABORATORY, PORTON (COLONIAL INSECTICIDE COMMITTEE)

Headquarters : Ministry of Supply, Chemical Defence Experimental Establishment, Porton, near Salisbury.

|  |    |
|--|----|
| A. B. Hadaway, Ph.D., <i>Entomologist.</i> | 19 |
| P. Bracey, B.Sc., <i>Entomologist.</i>     | 19 |
| F. Barlow, B.Sc., <i>Chemist.</i>          | 24 |
| D. J. Hall, <i>Scientific Assistant.</i>   | 24 |

## ANTI-LOCUST RESEARCH CENTRE

(Headquarters : British Museum (Natural History), London.  
(Tel. : Kensington 6323. Ext. 267.)

|  |        |
|--|--------|
| B. P. Uvarov, C.M.G., D.Sc., <i>Director.</i>  | 19     |
| D. L. Gunn, D.Sc., Ph.D., <i>Principal Scientific Officer</i> : co-ordination of laboratory and of field researches ; locust behaviour and aircraft control methods. | 19     |
| Miss Z. V. Waloff, M.Sc., <i>Senior Scientific Officer</i> : locust bioclimatics ; migrations.   | 19, 26 |

## COLONIAL TERRITORIES

|   | Subject |
|---|---------|
| Mrs. M. J. Richards, Ph.D., <i>Research Worker</i> : locust fecundity and fertility.  | 19      |
| V. M. Dirsh, D.Sc., <i>Research Worker</i> : taxonomic research on locusts.   | 19      |
| D. E. Davies, B.Sc., <i>Experimental Officer</i> : supervision of mapping; current information and forecasting.               | 19, 29  |
| P. Hunter Jones, B.Sc., <i>Assistant Experimental Officer (Acting Scientific Officer)</i> : supervision of locust laboratory. | 19      |
| Miss E. M. Ralfs, B.A., <i>Experimental Officer</i> : bibliography.   | 19      |
| Mrs. J. Rooke, <i>Assistant Experimental Officer</i> : mapping.   | 19      |
| Miss J. M. E. Fortescue-Foulkes, B.A., <i>Assistant Experimental Officer</i> : mapping.                                       | 19      |
| Miss A. M. Taylor, B.Sc., <i>Assistant Experimental Officer</i> : locust laboratory.  | 19      |
| R. C. Elliott, <i>Assistant Experimental Officer</i> : locust laboratory (temporary).   | 19      |
| Miss L. R. Day, <i>Assistant (Scientific)</i> : locust laboratory (temporary).  | 19      |
| A. T. Thompson, <i>Secretary</i> .  | 19      |

## WEST AFRICA

### West African Cacao Research Institutes

Tafo, Gold Coast.

|   |   |
|---|---|
| O. J. Voelcker, C.B.E., M.A., A.I.C.T.A., <i>Director of Cacao Research</i> . | 1 |
| J. West, B.S.A., A.I.C.T.A., <i>Deputy Director</i> .                         | 1 |

### DIVISION OF PATHOLOGY AND BOTANY

|  |       |
|--|-------|
| J. McA. Todd, B.Sc., A.I.C.T.A., <i>Plant Pathologist</i> .                        | 6, 22 |
| A. H. Strickland, M.A., A.I.C.T.A., F.R.E.S., <i>Entomologist</i> : virus vectors. | 19    |
| H. Owen, B.Sc., A.I.C.T.A., <i>Plant Pathologist</i> .                             | 6, 20 |

### DIVISION OF ENTOMOLOGY

|  |    |
|--|----|
| J. Nicol, B.Sc. (For.), A.R.P.S., <i>Senior Entomologist</i> .   | 19 |
| R. G. Donald, B.Sc., A.I.C.T.A., F.R.E.S., <i>Entomologist</i> . | 19 |
| G. Williams, B.Sc., A.I.C.T.A., <i>Entomologist</i> .            | 19 |
| A. J. P. Goodchild, B.Sc., <i>Entomologist</i> .                 | 19 |

### DIVISION OF SOIL SCIENCE AND CHEMISTRY

|  |       |
|--|-------|
| J. A. R. MacLean, B.Sc., A.I.C., Ph.D., <i>Chemist</i> . | 5, 25 |
| <i>Temporary Appointment</i>                             |       |
| T. E. Wasowicz, M.Sc., Ph.D., <i>Soil Scientist</i> .    | 2     |

### DIVISION OF AGRONOMY

|   |       |
|---|-------|
| R. J. Benstead, N.D.A., C.D.A., <i>Agronomist</i> .   | 9, 12 |
| <i>Temporary Appointment</i>                          |       |
| E. W. Alther, Dip.Agr., S.F.I.T., <i>Agronomist</i> . | 9, 12 |

## GAMBIA

## DEPARTMENT OF AGRICULTURE

Bathurst.

|   |    |
|---|----|
| J. H. Palmer, B.A. (Cantab.), A.I.C.T.A., <i>Senior Agricultural Officer.</i>               | 20 |
| R. A. Kitching, Diploma in Agriculture (Edin.), <i>Agricultural Officer.</i>                | 20 |
| P. A. Donovan, B.Sc. (St. Andrews), Dip.Agric. (Cantab.), <i>Agricultural Officer.</i>      | 20 |
| W. A. Wright, B.Agr. (Q.U.B.), Dip.Agr. (Cantab.), A.I.C.T.A., <i>Agricultural Officer.</i> | 20 |

## VETERINARY DEPARTMENT

|  |            |
|--|------------|
| A. Fulton, M.R.C.V.S., <i>Director of Veterinary Services, Gambia—</i> | 1, 13, 14, |
| <i>Sierra Leone.</i>   | 22, 23     |

## GOLD COAST

## DEPARTMENT OF AGRICULTURE

|   |      |
|---|------|
| D. H. Urquhart, B.Sc. (Agr.), <i>Director.</i>  | 1    |
| R. D. Linton, B.Sc. (Agr.) (Belfast), A.I.C.T.A., <i>Deputy Director.</i>   | 1    |
| J. D. Broatch, B.Sc. (Agr.) (Edin.), A.I.C.T.A., <i>Deputy Director (Cocoa Industry).</i>                             | 1    |
| C. L. Skidmore, B.Sc. (Agr.) (Lond.), Dip.Agr. (S.E.A.C.), A.I.C.T.A., <i>Assistant Director.</i>                     | 1    |
| E. L. Hay, M.B.E., B.Sc. (Agr.) (Glas.), A.I.C.T.A., <i>Assistant Director (Cocoa Industry).</i>                      | 1    |
| C. F. Charter, M.A., <i>Chief Soil Scientist.</i>   | 2    |
| A. Smith, B.A. (Agr.) (Oxon.), <i>Principal Agricultural Education Officer.</i>                                       | 1    |
| C. N. Coombes, B.Sc. (Econ.) (Lond.). (Upper 2nd Class Hons.), Dip.Agr. (Mauritius), <i>Agricultural Economist.</i>   | 27   |
| C. W. Lynn, M.B.E., Dip.Agr. (Wye), A.I.C.T.A., <i>Senior Agricultural Officer. (Seconded to I.C.T.A., Trinidad.)</i> | 1    |
| J. M. Ward, N.D.A., N.D.D., Dip.Agr. (Oxon.), A.I.C.T.A., <i>Senior Agricultural Officer.</i>                         | 1    |
| A. E. Moss, B.Sc. (Agr.), Dip.Agr. (Wye), A.I.C.T.A., <i>Senior Agricultural Officer.</i>                             | 1    |
| A. Jones, B.Sc. (Wales), A.I.C.T.A., <i>Senior Agricultural Officer.</i>  | 1    |
| F. R. B. Mullan, M.A. (Cantab.), <i>Senior Agricultural Officer.</i>  | 1    |
| M. Akenhead, B.Sc. (Agr.) (Lond.), Dip.Agr. (Wye), A.I.C.T.A., <i>Senior Agricultural Officer.</i>                    | 1    |
| J. O. Torto, B.Sc. (California), A.I.C.T.A., <i>Senior Agricultural Officer.</i>                                      | 1    |
| J. Cofie, B.Sc. (California), <i>Senior Agricultural Officer.</i>   | 1    |
| G. R. Spurrell, E.D., B.A. (Cantab.), <i>Senior Agricultural Officer.</i>   | 1    |
| R. Smith, B.A., Dip.Agr. (Cantab.), A.I.C.T.A., <i>Senior Agricultural Officer.</i>                                   | 1    |
| J. H. Hinds, B.Sc. (Hons.) (Botany) (Wales), A.I.C.T.A., <i>Senior Agricultural Officer : grasses.</i>                | 1, 8 |



|   |       |
|---|-------|
| W. B. Mason, C.D.A. (Wye), A.I.C.T.A., <i>Agricultural Officer.</i>   | 1     |
| I. Sibson, N.D.A., Dip.Agr. (Durham), D.T.A., <i>Agricultural Officer.</i>  | 1     |
| D. Westwood, B.Sc., A.R.C.S., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1     |
| D. J. Billes, B.Sc. (Lond.), A.I.C.T.A., A.R.C.S., F.R.E.S., <i>Agricultural Officer.</i>                               | 1     |
| M. A. Blane, B.Sc. (Agr.) (Lond.), <i>Agricultural Officer.</i>   | 1     |
| B. J. Silk, B.Sc. (Agr.), Dip. Agr. (Wye), A.I.C.T.A., <i>Agricultural Officer : agricultural education.</i>            | 1     |
| P. S. Hammond, B.Sc. (Agr.), A.I.C.T.A., <i>Agricultural Officer.</i>   | 1     |
| A. Lesslie, B.Sc. (Botany and Zoology), A.I.C.T.A., <i>Agricultural Officer.</i>  | 1     |
| L. F. Derraugh, B.Agr., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1     |
| R. W. Eccles, B.Sc. (Agr.), <i>Agricultural Officer.</i>  | 1     |
| F. A. Leeds, Dip.Agr. (Wye), <i>Agricultural Officer.</i>   | 1     |
| J. L. Jollans, B.A. (Cantab.), A.I.C.T.A., <i>Agricultural Officer.</i>   | 1     |
| P. S. Castle, B.A. (Agr.) (Cantab.), <i>Agricultural Officer.</i>   | 1     |
| W. Smith, College Dip. Agr., N.D.A., <i>Agricultural Officer.</i>   | 1     |
| A. K. Asem, B.A. (Cantab.), <i>Agricultural Officer.</i>  | 1     |
| H. Vine, B.Sc., Ph.D., A.I.C.T.A., <i>Senior Soil Scientist.</i> (Seconded from Nigeria).                               | 2, 24 |
| C. A. Thorold, M.A. (Oxon.), A.I.C.T.A., <i>Specialist : plant pathology.</i>   | 6     |
| C. A. Lister, B.Sc. (Bot.), <i>Specialist : plant pathology.</i>  | 6     |
| P. H. Nye, B.Sc. (Oxon), B.A. (Hons.) (Oxon.), <i>Specialist : chemistry.</i>   | 24    |
| W. A. Hughes, B.Sc. (Hons.) (Wales), <i>Specialist : entomology.</i>  | 19    |
| J. Bowden, B.Sc. (Hons.) (Bristol), <i>Specialist : entomology.</i>   | 19    |
| R. A. Neve, B.Sc. (Agr.) (Hons.), Agr. Botany (Reading), Dip. Agr. Science (Cantab), <i>Specialist : plant breeder.</i> | 4     |
| P. S. L. Benton, R.H.S. General Certificate, Kew Certificate, <i>Horticulturist.</i>                                    | 9     |

### **FORESTRY DEPARTMENT**

Accra.

|   |    |
|---|----|
| R. L. Brooks, Dip.For. (Edin.), <i>Chief Conservator of Forests, Officer in Charge.</i> | 1  |
| G. H. Thompson, B.A., <i>Assistant Conservator of Forests, Entomologist.</i>            | 10 |
| C. J. Taylor, B.Sc., <i>Senior Assistant Conservator of Forests, Silviculturist.</i>    | 10 |

### **ANIMAL HEALTH DEPARTMENT**

Accra

|   |                 |
|---|-----------------|
| S. Simpson, M.R.C.V.S., <i>Director of Veterinary Services : in charge Nungwa (Accra) : diagnostic laboratory and field investigational work.</i>                         | 1, 14, 16<br>18 |
| F. W. Aston, M.R.C.V.S., <i>Deputy Director of Veterinary Services : field investigational work.</i>  | 16, 18          |
| R. A. Hutchinson, B.Sc., M.R.C.V.S., <i>Senior Veterinary Officer : in charge Pong-Tamale : diagnostic, serum and vaccin laboratory ; and field investigational work.</i> | 14, 16, 18      |

|  |                   |
|--|-------------------|
| W. A. G. Richter, M.R.C.V.S. : field investigational work. | Subject<br>16, 18 |
| J. L. McCulloch, M.R.C.V.S. : field investigational work.  | 16, 18            |

## NIGERIA

## AGRICULTURE DEPARTMENT

## Ibadan

|   |   |
|---|---|
| A. G. Beattie, B.S.A., <i>Director of Agriculture</i> : administration.   | 1 |
| J. D. Brown, B.Sc., <i>Deputy Director of Agriculture (Headquarters)</i> : administration.                              | 1 |
| J. W. Wallace, B.Sc., <i>Deputy Director of Agriculture, Northern Provinces</i> : administration.                       | 1 |
| M. Park, A.R.C.S. (Lond.), <i>Deputy Director of Agriculture, Eastern Provinces</i> : administration.                   | 1 |
| R. Johns, N.D.A., A.I.C.T.A., <i>Deputy Director of Agriculture, Western Provinces</i> : administration.                | 1 |
| D. H. Brown, Cert. of Agr., A.I.C.T.A., <i>Assistant Director of Agriculture</i> : administration.                      | 1 |
| S. D. Ross, B.Sc., <i>Assistant Director of Agriculture</i> : administration.   | 1 |
| F. W. Toovey, A.R.C.S., B.Sc. (Hons.), <i>Officer in Charge, Oil Palm Research Station</i> : administration (research). | 1 |
| M. Greenwood, M.Sc., <i>Principal Agricultural Officer</i> : soil chemistry, etc.                                       | 1 |
| D. H. Welch, B.Sc. (Hons.), A.I.C.T.A., <i>Principal, Agricultural School</i> .   | 1 |
| T. A. Phillips, B.Sc. (Hort.), A.I.C.T.A., <i>Principal, Agricultural School</i> .                                      | 1 |
| Capt. R. B. Shorter, Dip.Agr., <i>Senior Agricultural Officer</i> : extension work, Northern Provinces.                 | 1 |
| E. T. Holmes, Dip. Agr., <i>Senior Agricultural Officer</i> : extension work, Northern Provinces.                       | 1 |
| F. E. Buckley, A.R.C.S., A.I.C.T.A., <i>Senior Agricultural Officer</i> : administration.                               | 1 |
| A. V. Gibberd, N.D.A., N.D.D., A.I.C.T.A., <i>Senior Agricultural Officer</i> : administration.                         | 1 |
| A. F. W. Sheffield, A.I.C.T.A., D.I.C.T.A., <i>Senior Agricultural Officer</i> : administration.                        | 1 |
| E. W. Momber, B.Sc., Dip.Agr., A.I.C.T.A., <i>Senior Agricultural Officer</i> : extension work, Northern Provinces.     | 1 |
| M. W. Gibbon, B.A., A.I.C.T.A., <i>Senior Agricultural Officer</i> : extension work, Northern Provinces.                | 1 |
| W. T. Dalgarno, M.A., B.Sc., A.I.C.T.A., <i>Senior Agricultural Officer</i> : extension work, Northern Provinces.       | 1 |
| J. F. Ward, Dip. in Horticulture, M.A., <i>Senior Agricultural Officer</i> : extension work, Northern Provinces.        | 1 |
| V. F. O. Olivier, B.Sc., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Northern Provinces.                  | 1 |
| J. M. Usher-Wilson, B.S.A., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Northern Provinces.               | 1 |

|   |   |
|---|---|
| J. D. Tallantire, B.Sc., N.D.A. (Hons.), A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Eastern Provinces. | 1 |
| R. F. A. L. Reed, B.Sc. (Hons.), A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Northern Provinces.        | 1 |
| C. H. F. Walker, B.A., A.I.C.T.A., <i>Agricultural Officer</i> : administration.                                      |   |
| W. F. Gwilliam, N.D.A., Dip.Agr., <i>Agricultural Officer</i> : extension work, Eastern Provinces.                    | 1 |
| J. R. Brown, B.Sc., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Eastern Provinces.                      | 1 |
| E. J. Butler, B.A., <i>Agricultural Officer</i> : extension work, Northern Provinces.                                 | 1 |
| T. N. Greeves, B.Sc., Master of Agr., <i>Agricultural Officer</i> : extension work, Northern Provinces.               | 1 |
| F. J. Harper, B.Sc., A.I.C.T.A., <i>Agricultural Officer</i> : farm and extension work, Colony.                       | 1 |
| P. A. Gething, B.A., Dip.Agr., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Eastern Provinces.           | 1 |
| J. W. D. Goodban, B.A., Agr.Dip., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Northern Provinces.       | 1 |
| V. E. Gale, B.Sc., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Western Provinces.                       | 1 |
| A. H. S. Vigo, <i>Agricultural Officer</i> : extension work, Northern Provinces.                                      | 1 |
| T. E. Ryall, B.Sc., A.I.C.T.A., <i>Agricultural Officer</i> : farm and extension work, Northern Provinces.            | 1 |
| D. B. Jamieson, B.Sc., <i>Agricultural Officer</i> : extension work, Eastern Provinces.                               | 1 |
| J. A. K. Thompson, B.A., <i>Agricultural Officer</i> : seconded to St. Helena.  | 1 |
| S. Hunter, B.Sc., A.I.C.T.A., <i>Agricultural Officer</i> : Agricultural School.                                      | 1 |
| H. J. Taylor, Dip. (Hons.), S.E.A.C.Cert., <i>Agricultural Officer</i> : extension work, Western Provinces.           | 1 |
| R. B. Warner, B.A., <i>Agricultural Officer</i> : administration.   | 1 |
| T. D. Smith, B.Sc., N.D.A., <i>Agricultural Officer</i> : farm work, Western Provinces.                               | 1 |
| L. D. G. Cromwell, <i>Agricultural Officer</i> : Agricultural School.   | 1 |
| F. G. Bridges, B.A., <i>Agricultural Officer</i> : Farm School.   | 1 |
| W. J. C. Little, B.A., A.I.C.T.A., <i>Agricultural Officer</i> : extension work, Western Provinces.                   | 1 |
| J. S. Campbell, B.Sc., Dip.Agr., <i>Agricultural Officer</i> : Botany Section.  | 1 |
| Miss D. I. Mortimer, B.Sc., <i>Agricultural Officer</i> : extension work, Eastern Provinces.                          | 1 |
| P. Mulholland, Dip.Agr., <i>Agricultural Superintendent</i> : extension work, Northern Provinces.                     | 1 |
| R. Miller, Dip.Agr., <i>Agricultural Superintendent</i> : extension work, Eastern Provinces.                          | 1 |
| R. F. S. Hainsworth, B.Sc., <i>Agricultural Superintendent</i> : extension work, Northern Provinces.                  | 1 |



## COLONIAL TERRITORIES

|   | Subject |
|---|---------|
| J. A. Carter, Dip.Agr., <i>Agricultural Superintendent</i> : Shika Stock Farm.                                | 1       |
| J. O. I. Longe, A.I.C.T.A., <i>Agricultural Superintendent</i> : extension work, Colony.                      | 1       |
| J. A. Makinde, <i>Agricultural Superintendent</i> : extension work, Western Provinces.                        | 1       |
| T. S. B. Aribisala, <i>Agricultural Superintendent</i> : Agricultural School                                  | 1       |
| D. R. E. Jackson, B.A., <i>Agricultural Superintendent</i> : extension work, Eastern Provinces.               | 1       |
| T. E. Geddie, B.Sc., Dip.Agr., <i>Agricultural Superintendent</i> : extension work, Eastern Provinces.        | 1       |
| H. Vine, B.Sc., Ph.D., A.I.C.T.A., <i>Chemist</i> : Seconded to Gold Coast.                                   | 2, 24   |
| H. Irving, B.Sc., <i>Chemist</i> : soil chemistry, etc.   | 24      |
| A. Pickles, M.Sc., A.I.C.T.A., <i>Entomologist</i> : insect pest ; locust control.                            | 19      |
| J. T. Davey, B.Sc. (Hons.), A.I.C.T.A., <i>Entomologist</i> : insect pest ; locust control.                   | 19      |
| W. E. Freeman, B.Sc., A.R.C.S., A.I.C.T.A., <i>Senior Botanist</i> : plant breeding, etc.                     | 4       |
| T. A. Russell, B.Sc. (Hons.), A.R.C.S., A.I.C.T.A., Dip.Agric., <i>Senior Botanist</i> : plant breeding, etc. | 4       |
| J. H. Gisborne, B.A., A.I.C.T.A., <i>Botanist</i> : plant breeding, etc.                                      | 4       |
| G. Browne, <i>Agricultural Engineer</i> : soil conservation ; mechanical cultivation.                         | 28      |
| W. J. Benson, Civil Engineer (Chartered), <i>Irrigation Engineer</i> : Seconded from P.W.D.                   | 28      |
| J. Kitching, B.Sc., A.M.I.C.E., <i>Specialist Officer</i> : irrigation.                                       | 28      |
| A. C. Trueblood, B.A., A.I.C.T.A., <i>Agronomist</i> : agronomy.  | 1       |
| D. H. Maggs, B.Sc. (Hons.), <i>Geneticist (Plant Breeder)</i> : plant breeding, etc.                          | 4       |
| J. M. Waterston, B.Sc. (Hons.), A.I.C.T.A., <i>Pathologist</i> : plant pathology.                             | 6       |

## VETERINARY DEPARTMENT

|  |               |
|--|---------------|
| W. G. Beaton, M.R.C.V.S., D.T.V.M., <i>Director of Veterinary Services.</i>                  | 1, 14, 15     |
| R. W. M. Mettam, M.Sc., M.R.C.V.S., <i>Assistant Director of Labour Services.</i>            | 1, 16, 22, 23 |
| R. S. Marshall, M.R.C.V.S., D.V.S.M., <i>Deputy Director of Veterinary Services.</i>         | 14, 15, 17    |
| R. J. Garner, M.A., M.R.C.V.S., <i>Veterinary Research Officer.</i>                          | 25            |
| D. E. Macgregor, B.Sc., M.R.C.V.S., <i>Veterinary Education Officer.</i>                     | 13            |
| R. M. Gambles, M.A., B.Sc., M.R.C.V.S., F.R.E.S., <i>Senior Veterinary Research Officer.</i> | 19, 22        |
| G. Williamson, O.B.E., M.R.C.V.S., D.V.S.M., <i>Principal, Veterinary School.</i>            | 15, 18        |
| A. L. C. Thorne, M.R.C.V.S., <i>Veterinary Research Officer.</i>                             | 22            |

MEDICAL DEPARTMENT

|   |        |
|---|--------|
| T. A. M. Nash, D.Sc., <i>Entomologist.</i>  | 19     |
| J. L. McLetchie, M.B., Ch.B. (Glas.), <i>Senior Medical Officer, Sleeping Sickness Service : disease control by naturalistic methods.</i> | 19, 23 |
| Col. H. W. Mulligan, M.B., Ch.B., M.D. (Hons.), D.Sc., D.T.M., <i>Director of West African Institute for Trypanosomiasis Research.</i>    | 18, 23 |
| A. J. Duggan, M.B., B.S., <i>West African Institute for Trypanosomiasis Research.</i>   | 18, 23 |
| F. L. Vanderplank, B.Sc., Ph.D., <i>Entomologist, West African Institute for Trypanosomiasis Research.</i>                                | 19     |

FOREST DEPARTMENT

|   |   |
|---|---|
| F. S. Collier, Dip.For. (Oxon.), <i>Chief Conservator of Forests.</i>                               | 1 |
| R. W. J. Keay, M.A., B.Sc. (Oxon.), <i>Assistant Cons. of Forests : plant taxonomy and ecology.</i> | 3 |

SIERRA LEONE

DEPARTMENT OF AGRICULTURE

Njala

|   |   |
|---|---|
| R. R. Glanville, C.B.E., B.A., B.Agr. (Dublin), A.R.C.S.I., <i>Director of Agriculture.</i> | 1 |
| G. W. Lines, M.B.E., M.A., Dip.Agr.Sc. (Cantab.), <i>Principal Agricultural Officer.</i>    | 1 |

SPECIALIST OFFICERS.

|   |       |
|---|-------|
| F. C. Deighton, O.B.E., M.A. (Cantab.), <i>Plant Pathologist.</i> | 6, 20 |
| F. A. Squire, B.Sc. (S. Africa), A.I.C.T.A., <i>Entomologist.</i> | 19    |
| H. W. Dougall, M.Sc. (Dunelm), <i>Agricultural Chemist.</i>       | 2     |

SENIOR AGRICULTURAL OFFICERS AND AGRICULTURAL OFFICERS

|   |   |
|---|---|
| H. Macluskie, Dip.Agr. (Aberdeen), <i>Senior Agricultural Officer.</i>                    | 1 |
| A. F. MacKenzie, A.R.C.S., B.Sc. (Lond.), A.I.C.T.A., <i>Senior Agricultural Officer.</i> | 1 |
| E. I. Nisbett, Dip.Hort. (Reading), <i>Agricultural Officer.</i>                          | 1 |
| R. M. Steven, Dip. I.C.T.A., <i>Agricultural Officer.</i>                                 | 1 |
| S. M. Taylor, B.Sc. (Agr.) (Aberystwyth), <i>Agricultural Officer.</i>                    | 1 |
| A. P. McWilliam, B.Sc. (Edin.), <i>Agricultural Officer.</i>                              | 1 |
| P. Adames, M.A. (Oxon.), A.I.C.T.A., <i>Agricultural Officer.</i>                         | 1 |
| E. S. Capstick, B.A. (Agr.) (Cantab.), A.I.C.T.A., <i>Agricultural Officer.</i>           | 1 |
| H. D. Jordan, A.R.C.S., B.Sc. (Lond.), A.I.C.T.A., <i>Agricultural Officer.</i>           | 1 |
| T. P. Wheldon, B.Sc. (Bangor), <i>Agricultural Officer.</i>                               | 1 |
| J. M. Dent, B.Sc. (St. Andrews), A.I.C.T.A., <i>Agricultural Officer.</i>                 | 1 |
| T. S. Jones, B.Sc. (Reading), A.I.C.T.A., <i>Agricultural Officer.</i>                    | 1 |
| J. A. Austin, B.Sc. (Reading), <i>Agricultural Officer.</i>                               | 1 |
| E. H. Nichols, B.Sc. (Dunelm), A.I.C.T.A., <i>Agricultural Officer.</i>                   | 1 |

| AGRICULTURAL SUPERINTENDENTS  |  | Subject |
|---|--|---------|
| G. C. Taylor, B.Agr. (Hampton), B.Sc. (Agr.) (Tuskegee), M.Ed. (Rutgers). |  | 1       |
| A. S. Kerton  |  | 1       |
| H. J. Williams, N.D.A.  |  | 1       |

### FOREST DEPARTMENT

|  |                                  |    |
|--|----------------------------------|----|
| Freetown   |                                  |    |
| R. S. Pelly, B.Sc. (For.) (Edinburgh), <i>Senior Assistant Conservator of Forests.</i> |                                  | 11 |
| J. K. Ross, B.Sc. (For.) (Edin.).  | } <i>Asst. Cons. of Forests.</i> | 10 |
| R. M. Palmer, B.Sc. (For.) (Aberdeen).   |                                  |    |
| A. J. Browning, M.A. (Oxon.)   |                                  |    |
| A. C. Frith, B.Sc. (For.) (Aberdeen).  |                                  |    |
| I. G. Bulmer, B.Sc. (For.) (Edin.).  |                                  |    |

### VETERINARY DEPARTMENT

|   |                   |
|---|-------------------|
| A. Fulton, M.R.C.V.S., <i>Director of Veterinary Services, Sierra Leone—Gambia.</i> | 1, 13, 14, 22, 23 |
| S. L. H. Walshe, M.R.C.V.S., <i>Veterinary Officer.</i>                             | 1, 13, 14, 22, 23 |

## EAST AFRICA

### EAST AFRICAN AGRICULTURE AND FORESTRY RESEARCH ORGANIZATION, NAIROBI, KENYA

|  |        |
|--|--------|
| Kenya (P.O. Box 601).<br>(Incorporating the East African Agricultural Research Institute, AMANI P.O., Tanganyika). |        |
| B. A. Keen, D.Sc., F.Inst. P., F.R.S., <i>Director.</i>  | 1, 2   |
| H. H. Storey, C.M.G., M.A., Ph.D., F.R.S., <i>Deputy Director.</i>   | 6, 22  |
| H. F. Birch, Ph.D., F.C.S. : soil chemistry.   | 2      |
| I. W. M. A. Black, Ph.D., A.I.C.T.A. : spectrography.  | 2      |
| L. R. Doughty, B.Sc. (Agr.), N.D.A. ( <i>In charge of Fertilizer Research Scheme</i> ).                            | 2      |
| D. W. Duthie, M.A., Ph.D., F.R.I.C. ( <i>Editor, East African Agricultural Journal</i> ) : soil chemistry.         | 2      |
| J. Glover, M.Sc. : plant physiology.   | 3      |
| D. W. Gourlay, B.A. (Agr.) : (field experiments : fertilizer research scheme).                                     | 2      |
| P. J. Greenaway, F.L.S. : systematic botany.   | 3      |
| H. P. Ledger, N.D.D. : animal husbandry.   | 18     |
| W. B. May, F.R.H.S. : horticulture (clove research scheme—Zanzibar).   | 9      |
| R. F. W. Nichols, : plant pathology.   | 22     |
| F. J. Nutman, D.Sc., D.I.C. : plant physiology : ( <i>Director-Clove Research Scheme, Zanzibar</i> )               | 3, 22  |
| P. Robinson, B.A., Dip. Stat. : statistics.  | 29     |
| Frances M. L. Sheffield, D.Sc. : cytology ( <i>Clove Research Scheme, Zanzibar</i> ).                              | 20, 22 |
| B. Verdcourt, B.Sc. : systematic botany.   | 3      |



## COLONIAL TERRITORIES

Subject

### SCIENTIFIC ASSISTANTS

|   |   |
|---|---|
| Annette L. Alexander, B.Sc. : analytical chemistry. | 2 |
| Doris M. Cooper : analytical chemistry.             | 2 |
| Audrey K. Ryland, B.Sc., : plant pathology.         | 6 |
| Elizabeth Smith, B.Sc. : spectrography.             | 2 |

## EAST AFRICAN VETERINARY RESEARCH ORGANISATION

|   |        |
|---|--------|
| E. G. White, Ph.D., B.Sc., B.Sc. (Physiol), F.R.C.V.S., <i>Director</i> .   | 1      |
| W. B. C. Danks, B.Sc., M.R.C.V.S., <i>Assistant Director</i> : rinderpest and other virus diseases.                 | 22     |
| H. R. Binns, O.B.E., M.A., B.Sc., M.R.C.V.S., <i>Principal Scientific Officer</i> : bovine pleuropneumonia.         | 22     |
| R. N. T. W. Fiennes, B.A., M.R.C.V.S., <i>Senior Veterinary Research Officer</i> : trypanosomiasis.                 | 23     |
| S. F. Barnett, Ph.D., B.Sc., M.R.C.V.S., <i>Veterinary Research Officer</i> : theileriasis.                         | 23     |
| J. G. Brotherston, M.R.C.V.S., <i>Senior Scientific Officer</i> : rinderpest.                                       | 22     |
| A. E. G. Markham, B.Sc., M.R.C.V.S., <i>Veterinary Research Officer</i> : tuberculosis.                             | 22     |
| J. A. Dinnik, Dr. Biol. Sci., <i>Senior Scientific Officer</i> : studies on helminth larvae on pasture.             | 21     |
| J. R. Todd, B.Sc., B.Agr., Dip. Agr. Sc. (Cantab.), <i>Scientific Officer</i> : nutrition and nutritional diseases. | 15, 25 |
| Jane B. Walker, B.Sc., <i>Research Officer</i> : studies on ticks.  | 19     |

## BRITISH SOMALILAND

### AGRICULTURAL AND VETERINARY DEPARTMENT

|  |   |
|--|---|
| E. F. Peck, B.V.Sc. (Toronto), M.R.C.V.S. (Liverpool), D.T.V.M. (Edinburgh). | 1 |
| A. S. McKinnon, N.D.A., N.D.D. (Hons.).                                      | 1 |

## KENYA

### DEPARTMENT OF AGRICULTURE

|  |           |
|--|-----------|
| P.O. Box 338, Nairobi : Tel. : 3035 ; 'Grams : Agricola, Nairobi.  |           |
| S. Gillett, Dip.Agr., <i>Director of Agriculture</i> .   | 1         |
| G. M. Roddan, B.Sc., N.D.A., A.I.C.T.A., <i>Deputy Director</i> .  | 1         |
| W. O. Sunman, B.Sc. (Agr.), Dip.Agr., <i>Assistant Director</i> .  | 1         |
| R. M. Nattrass, B.Sc. (Agr.), Ph.D., D.I.C., <i>Senior Plant Pathologist</i> : virus diseases of plants, forest pathology ; seed borne diseases ; seed testing.  | 6, 20     |
| R. H. Le Pelley, B.Sc., Ph.D., A.R.C.S., D.I.C., F.R.E.S., <i>Senior Entomologist</i> .  | 19        |
| G. H. Gethin Jones, M.Sc., <i>Senior Soil Chemist</i> : soil classification and land utilisation surveys ; phosphate state of local soil types ; development of local sources of phosphatic fertilisers ; pot culture studies. | 2, 12, 24 |

## COLONIAL TERRITORIES

|   |         |
|---|---------|
|   | Subject |
| H. C. Thorpe, B.Sc., A.R.C.S., A.I.C.T.A., <i>Senior Plant Breeder.</i>   | 4, 7    |
| D. C. Edwards, B.Sc., <i>Senior Pasture Research Officer : ecology.</i>   | 8       |
| A. C. Maher, M.A., Dip.Agr., A.I.C.T.A., <i>Senior Soil Conservation Officer.</i>   | 1, 28   |
| R. O. Barnes, A.M.S.A.Soc.C.E., <i>Senior Soil Conservation Engineer.</i>   | 28      |
| A. R. Melville, B.Sc., A.I.C.T.A., <i>Senior Entomologist : coffee.</i>   | 1, 19   |
| R. W. Rayner, B.A., A.I.C.T.A., <i>Plant Pathologist and Physiologist : coffee.</i>   | 3, 6    |
| H. C. Pereira, B.Sc., Ph.D., <i>Agricultural Chemist : coffee : soil physics.</i>   | 2, 26   |
| G. W. Gaddum, B.Sc. (Agr.), Dip.Agr., A.I.C.T.A., <i>Agricultural Officer (Pyrethrum) : field experimentation with pyrethrum.</i> | 7       |
| T. H. Jackson, Dip.Hortic., <i>Agricultural Officer (Horticulture).</i>   | 9       |
| A. F. Nichols, Dip.Agr., A.I.C.T.A., <i>Agricultural Officer (Sisal) : field experimentation with sisal.</i>                      | 12      |
| P. A. Jones, B.A. (Agr.), <i>Agricultural Officer (Coffee) : field experimentation with coffee.</i>                               | 12      |
| A. Bogdan (one time Lecturer in Botany, University of Rostov), <i>Pasture Research Officer.</i>                                   | 8       |
| J. F. Graham, M.Sc., <i>Entomologist.</i>   | 19      |
| A. Bolton, B.Sc., <i>Plant Breeder.</i>   | 4, 7    |
| G. H. Chaundy, M.B.E., B.Sc., <i>Principal, Egerton School of Agriculture.</i>  | 1       |
| R. E. T. Hobbs, Dip.Agr., A.I.C.T.A., <i>Senior Agricultural Officer.</i>   | 1       |
| J. T. Moon, Dip.Agr., A.I.C.T.A., <i>Senior Agricultural Officer.</i>   | 1       |
| J. E. P. Booth, B.Sc. (Agr.), Dip.Agr., A.I.C.T.A., <i>Senior Agricultural Officer.</i>   | 1       |
| F. B. Wilson, M.B.E., M.A., Dip.Agr., A.I.C.T.A., <i>Senior Agricultural Officer.</i>   | 1       |
| F. H. Ormerod, M.A., A.I.C.T.A., <i>Agricultural Officer.</i>   | 1       |
| G. S. Cowley, D.F.C., Dip.Agr., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1       |
| L. H. Brown, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1       |
| A. E. Pound, B.Sc. (Agr.), <i>Agricultural Officer.</i>   | 1       |
| E. Bellis, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1       |
| R. C. Williams, Dip.Agr., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1       |
| A. Storrar, B.Sc. (Agr.), A.I.C.T.A., <i>Agricultural Officer.</i>  | 1       |
| G. Gamble, <i>Agricultural Officer.</i>   | 1       |
| H. T. Lloyd, <i>Agricultural Officer.</i>   | 1       |
| G. B. Rattray, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>  | 1       |
| M. A. Barrett, B.Sc. (Dairying), <i>Agricultural Officer.</i>   | 1       |
| A. W. Thompson, <i>Agricultural Officer.</i>  | 1       |
| E. C. M. Green, <i>Agricultural Officer.</i>  | 1       |
| G. R. Henderson, D.S.C., B.Sc. (Agr.), <i>Agricultural Officer.</i>   | 1       |
| E. S. Porter, B.Sc. (Agr.), <i>Agricultural Officer.</i>  | 1       |
| T. B. Spence, B.Sc., <i>Agricultural Officer.</i>   | 1       |

## FORESTRY DEPARTMENT

|   |    |
|---|----|
| Nairobi.  |    |
| J. C. Rammell, M.A., Forestry Dip. (Oxon.), <i>Conservator of Forests.</i>  | 1  |
| R. M. Graham, Forestry Dip. (Oxon.), <i>Senior Assistant Conservator of Forests—Silviculturist (Plantation) Research.</i> | 10 |

## COLONIAL TERRITORIES

|   |               |
|---|---------------|
| R. A. C. Skipper, A.M.I.C.E., <i>Utilisation Officer—Timber.</i>                      | Subject<br>11 |
| J. C. M. Gardner, A.R.C.S., D.I.C., <i>Forestry Dip. (Cam.), Forest Entomologist.</i> | 19            |

### DEPARTMENT OF VETERINARY SERVICES

|   |            |
|---|------------|
| Kabete. (Tel. : Nairobi 2646).  |            |
| E. Beaumont, M.R.C.V.S., D.V.S.M., <i>Director of Veterinary Services.</i>  | 1          |
| H. S. Purchase, Ph.D., B.Sc., F.R.C.V.S., <i>Chief Veterinary Research Officer.</i>                               | 15, 16, 22 |
| E. A. Lewis, M.Sc., Ph.D., <i>Chief Field Zoologist and Executive Officer, Tsetse Committee.</i>                  | 19, 23     |
| J. Anderson, D.Sc., Ph.D., M.R.C.V.S., <i>Senior Veterinary Research Officer, Experimental Station, Naivasha.</i> | 14, 16, 22 |
| S. E. Piercy, Ph.D., B.Sc., M.R.C.V.S., Dip. Agr., <i>Veterinary Research Officer.</i>                            | 22         |
| M. F. Fitzpatrick, M.R.C.V.S., D.V.S.M., <i>Veterinary Research Officer.</i>                                      | 22         |
| Mrs. R. M. Simpson, M.R.C.V.S., <i>Veterinary Research Officer.</i>   | 22         |
| Miss B. L. Duthy, B.Sc. (Hons.) (Lond.), <i>Zoologist.</i>  | 21         |
| Miss U. S. McCurdy, M.A. (Edin.), F.L.A., <i>Librarian.</i>   |            |

## TANGANYIKA

### DEPARTMENT OF AGRICULTURE

|   |                                       |                |
|---|---------------------------------------|----------------|
| Dar-es-Salaam.  |                                       |                |
| C. E. J. Biggs, B.Sc. (Lond.) Dip. Agri. (Wye), <i>Deputy Director of Agriculture.</i> Tel. Dar es Salaam 470.  |                                       | 1              |
| H. R. Smart, B.Sc. (Agr.) (South Africa), A.I.C.T.A. <i>Senior Agricultural Officer.</i> Tel. Dar es Salaam 865.  |                                       | 1              |
| F. R. Sanders, B.A. (Hons.) (Cantab.), C.D.A., <i>Senior Research Officer, In Charge of Coffee Research Station, Lyamungu.</i> (Tel. : Moshi 91. P.O. Moshi).   |                                       | 1, 2, 8, 9, 17 |
| G. B. Wallace, B.Sc., Ph.D., <i>Plant Pathologist</i> : mainly engaged on research with coffee, also crops in general. Lyamungu. (Tel. : Moshi 91. P.O. Moshi).   |                                       | 6, 12, 20, 22  |
| F. B. Notley, M.Sc., A.I.C.T.A., <i>Entomologist</i> : mainly engaged on coffee : locust control. (Tel. : Moshi 91. Lyamungu. P.O. Moshi).  |                                       | 19             |
| G. W. Lock, O.B.E., N.D.A., N.D.D., <i>Senior Research Officer, Sisal Advisory Officer, In Charge of Sisal Experiment Station, Mlingano</i> : field investigations on sisal and cross breeding. (Tel. : Ngomeni 8. P.O. Ngomeni.) |                                       | 1, 2, 4, 6, 7, |
| C. J. McGregor, C.D.A., <i>Senior Agricultural Officer</i> : experimental work on potatoes.   | } general<br>investigational<br>work. | 1, 7, 8        |
| A. H. Savile, C.D.A., A.I.C.T.A., <i>Senior Agricultural Officer.</i>   |                                       |                |
| N. V. Rounce, C.D.A., A.I.C.T.A., <i>Senior Agricultural Officer.</i>   |                                       |                |
| A. S. Stenhouse, B.Sc., B.Sc. (Agr.) (Aberdeen), N.D.A., <i>Senior Agricultural Officer</i>   |                                       |                |
| A. Pitcairn, Dip.Agr. (Edin.), <i>Senior Agricultural Officer.</i> (Tel. : Dar-es-Salaam 865)   |                                       |                |



## COLONIAL TERRITORIES

|   | Subject  |
|---|--|
| D. Thornton, B.Sc., <i>Senior Agricultural Officer, Soil Conservation Officer, In Charge of Soil Conservation Service.</i> P.O. Arusha.   | 1, 7, 8, 28  |
| H. Doggett, B.A. (Cantab.), A.I.C.T.A., <i>Botanist</i> , P.O. Ukiriguru Experiment Station, P.O. Fela, Lake Province.  | 3, 4, 7, 8   |
| E. C. Diekmahns, B.Sc. (Hons.) (Glas.), Dip.Agr. (Cantab.), <i>Plant Physiologist</i> —Sisal Experiment Station, Mlingano. Tel.: Ngomeni 8. P.O. Ngomeni. Study of mineral nutrition of <i>Agave sisalana</i> and its relation to deficiency diseases. A preliminary survey of the uses of growth promoting substances in relation to the quick establishment of the sisal plant. | 3, 12  |
| R. J. M. Swynnerton, M.C., B.A., Dip.Agr. (Cantab.), A.I.C.T.A.: <i>Senior Agricultural Officer.</i>  | 1, 7, 8  |
| J. K. Robertson, B.Sc. (Agr.) (Aberdeen), A.I.C.T.A., <i>Agricultural Officer.</i>  | 1  |
| T. C. Cairns, B.Sc. (Edin.), <i>Agricultural Officer.</i>   | <div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 4em; margin-right: 10px;">}</div> <div style="text-align: left;"> <p>general<br/>agricultural<br/>and<br/>improvement<br/>of native crops.</p> </div> </div> |
| H. Gillman, M.Sc., A.I.C.T.A., <i>Senior Agricultural Officer.</i>  |  |
| T. H. Marshall, Cert.Kew., F.R.H.S., <i>Agricultural Officer.</i>   |  |
| M. Lunan, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>   |  |
| J. T. Purvis, B.Sc. (Agr.), <i>Senior Agricultural Officer.</i>   |  |
| T. S. Jervis, <i>Agricultural Officer.</i>  |  |
| R. W. Collett, <i>Agricultural Officer.</i>   |  |
| H. L. Brett, <i>Agricultural Officer.</i>   |  |
| F. E. Luscombe, B.Sc. (Agr.), A.I.C.T.A., <i>Agricultural Officer.</i>  |  |
| E. T. Ward, C.D.A., <i>Agricultural Officer.</i>  |  |
| A. H. B. Childs, M.R.A.C., Q.A.L.A.S., <i>Agricultural Officer.</i>   |  |
| J. D. Hunter-Smith, B.Sc. (Agr.), A.I.C.T.A., <i>Agricultural Officer.</i>  |  |
| C. G. Glegg, Dip.Hort. (Wye), <i>Agricultural Officer.</i>  |  |
| J. S. Gunn, B.Sc. (Agr.), Dip.Agr. (Cantab.), <i>Agricultural Officer.</i>  |  |
| J. B. Clegg, B.A. (Agr.), <i>Agricultural Officer.</i>  |  |
| W. G. Brookbank, Dip.Agr. (Cantab.), A.I.C.T.A.   | <div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 4em; margin-right: 10px;">}</div> <div></div> </div>   |
| I. E. Davies, B.A. (Cantab.), B.Sc. (Agr.).   |  |
| N. E. S. Mutter, B.Sc. (Agr.).  |  |
| D. H. Drennan, B.Sc. Ireland, Dip. (Agr.) (Cantab.).  |  |
| A. Jefferiss, B.Sc. (Hort.) (Reading), Kew. Cert.   |  |
| L. M. Fernie, <i>Horticulturist, Coffee Research Station, Lyamungu</i> : mainly engaged on the vegetation reproduction of coffee and general coffee experimental work. (Tel: Moshi 91. P.O. Moshi).   | 9  |

## DEPARTMENT OF VETERINARY SCIENCE AND ANIMAL HUSBANDRY

Mpwapwa.

|   |           |
|---|-----------|
| J. K. H. Wilde, M.R.C.V.S., M.Sc., B.Sc. (Hons.), A.R.C.S., <i>Chief Veterinary Research Officer.</i> | 1, 13, 15 |
| J. Robson, M.R.C.V.S., B.Sc., <i>Veterinary Research Officer.</i>                                     | 13, 15    |
| H. J. van Rensburg, M.Sc., <i>Pasture Research Officer.</i>   | 2, 3, 8   |

Tumbi.  
G. D. Scott, B.Sc., *Pasture Research Officer.*

2, 3, 8

## DEPARTMENT OF TSETSE SURVEY AND RECLAMATION

Shinyanga.

|   |  |         |    |
|---|--|---------|----|
| H. M. Lloyd, A.R.C.S., F.R.E.S.,<br><i>Director</i>           | Tsetse Surveys<br>and recommenda-<br>tions for tsetse<br>reclamation | Arusha. | 19 |
| A. G. H. Dufrayer, <i>Provincial<br/>Tsetse Officer.</i>      |  | Kondoa. | 19 |
| H. Harrison, <i>Provincial Tsetse<br/>Officer (Temp.)</i>     |  | Arusha. | 19 |
| J. P. Bradley, <i>Provincial Tsetse<br/>Officer (Acting).</i> |  | Mwanza. | 19 |

## FOREST DEPARTMENT

Morogoro.

- W. M. Robertson, B.Sc. (For.), *Conservator of Forests* : co-ordina- 1, 3, 10, 11  
tion of investigations and experiments as designed towards  
furthering the economic development and systematic working  
of forest resources.
- L. G. T. Wigg, M.A., Dip.For., *Senior Assistant Conservator of* 1, 3, 10, 11  
*Forests* : assisting above and in systematic botany.
- H. Fraser, B.Sc. (For.) : working plans and forest statistics. 10

Malya.

- M. S. Parry, B.A. (For.), *Silviculturist* : botanical and ecological 10, 11  
study ; experimental regeneration and propagation ; observa-  
tions of growth rate and volume production ; determination of  
cultural and economic values of selected species ; also critical  
study of various fire-protection methods ; identification and  
classification of East African woods according to their micro-  
scopic features, and record thereof by perforated index-card  
system.

Moshi.

- H. W. Hamlin, B.A. (For.) : co-ordination of exploitation ; mar- 11  
keting, grading and timber control ; and investigations therein.
- J. F. Hughes, B.Sc., B.A. (For.), *Utilization Officer* : study of pro- 11  
spective uses and markets for forest products ; also of measures  
for improving locally the conversion, seasoning, preservation and  
handling of timber.

## CHEMICAL DEPARTMENT

(Responsible for the chemical work of the Agricultural, Veter-  
inary and other departments).

- W. D. Raymond, O.B.E., B.Sc. (Hons.), Ph.D. (Lond.), F.R.I.C., 1, 24  
*Government Chemist.* (Tel. : Dar-es-Salaam 655).
- G.H. Payne, M.Sc., A.W.A.S.M., A.A.C.I., *Chemist.* 2, 24
- R. P. St. J. Watkin, B.Sc., A.R.I.C., *Chemist.* 5, 24

## UGANDA

## DEPARTMENT OF AGRICULTURE

Entebbe.

**Administrative**

|   |   |
|---|---|
| A. B. Killick, B.Sc. (Lond.), Dip.Agr. (Wye), <i>Director of Agriculture.</i>   | 1 |
| T. Y. Watson, M.B.E., B.Sc. (Agr.) (Aberdeen), Dip. Agr. (Cantab.)<br><i>Deputy Director of Agriculture.</i>              | 1 |
| T. R. Hayes, M.Sc. (Manchester), A.I.C.T.A., <i>Assistant Director of Agriculture.</i>                                    | 1 |
| R. K. Kerkham, B.A. (Cantab.), Dip.Agr. (Cantab.), A.I.C.T.A.,<br><i>In Charge of Kawanda Station : animal husbandry.</i> | 1 |
| E. Williams, B.Sc. (Aberdeen), A.I.C.T.A., <i>In Charge of Serere Station.</i>  | 1 |

**Research**

## ENTOMOLOGY

|   |    |
|---|----|
| W. V. Harris, M.Sc. (Durham), A.I.C.T.A., F.R.E.S., F.Z.S.,<br><i>Senior Entomologist : general advisory work ; termites. (Stationed at Kawanda.)</i> | 19 |
| A. P. G. Michelmores, B.A. (Cantab.), F.R.E.S., <i>Senior Entomologist : insect pests of coffee. (Stationed at Kawanda.)</i>                          | 19 |

## BOTANY

|  |       |
|--|-------|
| J. D. Jameson, M.A. (Oxon.), A.I.C.T.A., <i>Senior Botanist, Plant Breeder : cotton. (Stationed at Kawanda.)</i> | 3, 4  |
| D. G. Thomas, B.Sc. (University College, Wales), Dip.Agr. (Cantab.), <i>Botanist. (Stationed at Kawanda.)</i>    | 3, 20 |

## CHEMISTRY.

|   |    |
|---|----|
| G. Griffith, B.Sc., Ph.D., A.R.I.C., A.I.C.T.A., <i>Senior Chemist. (Stationed at Kawanda.)</i> | 24 |
|---|----|

## VETERINARY DEPARTMENT

Kampala.

**Administrative**

|  |    |
|--|----|
| H. Cronly, M.R.V.C.S., D.T.V.M. (Edin.), D.V.S.M., <i>Director of Veterinary Services.</i> | 1  |
| J. B. Randall, M.A. (Cantab.), M.R.C.V.S., <i>Deputy Director of Veterinary Services.</i>  | 17 |

**Research**

|   |    |
|---|----|
| S. G. Wilson, M.R.C.V.S., B.Sc. (Belf.), Ph.D. (Edin.), B.Sc. (Edin.)<br>D.T.V.M. (Part 1), <i>Chief Veterinary Research Officer.</i> | 16 |
|---|----|

**Senior Veterinary Officers**

|  |    |
|--|----|
| H. G. Stewart, M.R.C.V.S., D.T.V.M. (Edin.). | 17 |
| C. P. Downes, M.R.C.V.S., D.V.S.M., D.T.V.M. | 17 |
| J. E. R. Roe, M.R.C.V.S.                     | 17 |
| R. N. Sanders, B.V.Sc. (Sydney).             | 17 |



**COLONIAL TERRITORIES**

|                            | Subject |
|----------------------------|---------|
| <b>Veterinary Officers</b> |         |
| J. MacDonald, M.R.C.V.S.   | 17      |
| A. Taylor, M.R.C.V.S.      | 17      |
| L. S. Pfob, M.R.V.C.S.     | 17      |

**DEPARTMENT OF FORESTRY**

|   |    |
|---|----|
| Entebbe.  |    |
| <b>Administrative</b>   |    |
| W. J. Eggeling, B.Sc. (For.), Ph.D., <i>Conservator of Forests.</i> | 1  |
| <b>Research</b>   |    |
| C. H. Tack, <i>Forest Engineer.</i>                                 | 11 |
| H. C. Dawkins, B.A., <i>Forest Ecologist.</i>                       | 10 |

**ZANZIBAR**

**DEPARTMENT OF AGRICULTURE**

|   |  |
|---|--|
| Zanzibar.   |  |
| O. S. Swainson, B.A. (Cantab.), <i>Director : general policy.</i>   | 1  |
| A. K. Briant, M.A. (Cantab.), Dip.Agr. (Cantab.), A.I.C.T.A.,<br><i>Senior Agricultural Officer, Assistant to the Director.</i> | 1  |
| <i>Agricultural Officers :</i>  |  |
| G. E. Tidbury, B.Sc. (Lond.), A.R.C.S.  | } General 7, 8, 14, 17<br>investigations; 18<br>coconuts, cloves,<br>foodcrops and<br>livestock. |
| G. W. Anderson, B.Sc. (Agr.), A.I.C.T.A.  |  |
| D. W. Winter, B.Sc. (St. Andrews), A.I.C.T.A.   |  |
| <i>Agricultural Development Officers :</i>  |  |
| G. D. Wilkinson, B.Sc. (Lond.), N.D.A.  |  |
| R. G. Brett, Dip. Agr. (Harper Adams).  |  |
| <i>Attached to the Department of Agriculture :</i>  |  |
| A. L. Griffith, M.A., D.Sc., O.B.E., <i>Forest Officer : investigations and policy.</i>   | 11   |
| W. E. Calton, B.A., A.R.I.C., Dip.Agr., <i>Government Chemist : soil and general investigations.</i>                            | 2  |
| J. C. Alley, M.R.C.V.S. (Dublin), <i>Veterinary and Livestock Officer : disease control.</i>                                    | 16   |

**CENTRAL AFRICA**

**NORTHERN RHODESIA**

**DEPARTMENT OF AGRICULTURE**

|  |         |
|--|---------|
| Mazabuka.  |         |
| E. F. Martin, Dip.Agr. (H.A.A.C.), <i>Director of Agriculture.</i>       | 1       |
| J. C. Eyre, B.Sc. (Agr.), D.I.C., <i>Deputy Director of Agriculture.</i> | 1, 6, 9 |
| U. J. Moffat, O.B.E., B.Sc., N.D.D., <i>Senior Agricultural Officer.</i> | 1       |
| R. H. Fraser, B.Sc., A.I.C.T.A., <i>Senior Agricultural Officer.</i>     | 1, 7    |

## COLONIAL TERRITORIES

|   |              |
|---|--------------|
| J. N. Clothier, Dip.Agr. (Wye), A.I.C.T.A., <i>Senior Agricultural Officer.</i> | Subject<br>1 |
| C. J. M. Krige, B.Sc. (Agr.), <i>Senior Agricultural Officer.</i>               | 1            |
| C. G. Trapnell, B.A., <i>Ecologist.</i>   | 2, 3, 4      |
| J. R. E. Hindson, B.A., A.I.C.T.A., <i>Agricultural Officer.</i>                | 1            |
| C. E. Johnson, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>                  | 1            |
| J. A. Allan, B.Sc. (Agr.), <i>Agricultural Officer.</i>                         | 1, 8         |
| D. U. Peters, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>                   | 1            |
| B. C. Wills, B.Sc., A.I.C.T.A., <i>Agricultural Officer.</i>                    | 1            |
| J. D. Yelf, B.A., A.I.C.T.A., <i>Agricultural Officer.</i>                      | 1            |
| R. B. Reid, B.Sc., N.D.A., <i>Agricultural Officer.</i>                         | 1            |
| R. B. Symington, B.Sc., <i>Agricultural Officer.</i>                            | 7, 8         |

## VETERINARY DEPARTMENT

Mazabuka.

|   |    |
|---|----|
| J. H. N. Hobday, O.B.E., B.Sc., M.R.C.V.S., <i>Director of Veterinary Services.</i>             | 1  |
| G. F. Elliott, M.R.C.V.S., <i>Acting Deputy Director Veterinary Services.</i>                   | 17 |
| J. W. Macaulay, B.Sc. (Lond.), M.R.C.V.S., D.V.S.M., <i>Senior Veterinary Research Officer.</i> | 17 |
| J. McArthur, M.R.C.V.S.   | 17 |
| J. F. C. Swan, D.V.S.M., M.R.C.V.S.   | 17 |
| G. D. Shaw, B.Sc., M.R.V.C.S.   | 15 |
| P. J. Sheehy, M.R.C.V.S.  | 18 |
| S. L. Trevor, M.R.C.V.S.  | 17 |
| J. C. Rix, M.R.C.V.S.   | 17 |
| E. W. Ascott, B.Sc. (Lond.), M.R.C.V.S.   | 17 |
| Mrs. E. Hobday, M.R.C.V.S.  | 17 |
| S. A. Child, N.D.D., N.D.A., Dip.Agr.   | 17 |

## FOREST DEPARTMENT

Ndola.

|   |       |
|---|-------|
| C. E. Duff, M.A. (Oxon.), <i>Acting Conservator of Forests.</i> | 1, 10 |
| H. A. Rea, B.Sc., <i>Assistant Conservator of Forests.</i>      | 10    |
| D. Robertson, B.Sc., <i>Assistant Conservator of Forests.</i>   | 10    |
| H. S. H. Watson, <i>Assistant Conservator of Forests.</i>       | 10    |

## NYASALAND

### DEPARTMENT OF AGRICULTURE

|  |    |
|--|----|
| C. B. Garnett, M.A. (Cantab.), <i>Director of Agriculture.</i>   | 1  |
| M. H. Breese, B.Sc. (Wales), D.I.C., F.R.E.S., <i>Entomologist : general entomological problems, especially with reference to tobacco, tea, tung, cotton and food crops and stored products.</i> | 19 |
| V. R. Greenstreet, F.R.I.C., D.I.C., <i>Chemist : general agricultural problems with special reference to soils, feeding stuffs, fertilizers, crops, etc.</i>                                    | 24 |

## COLONIAL TERRITORIES

|   |   |                        |
|---|---|------------------------|
|   |   | Subject                |
| C. V. Cutting, <i>Analytical Chemist</i> : special problems connected with tung.  |   | 24                     |
| P. O. Wiehe, M.Sc., A.R.C.S., F.L.S., <i>Plant Pathologist</i> : general plant pathological problems, especially with reference to tobacco, tung and food crops.    |   | 6                      |
| S. T. Hoyle, B.A. (Cantab.), A.I.C.T.A., <i>Chief Agricultural Research Officer</i> : general agricultural problems, especially with tobacco and native food crops. |   | 7                      |
| E. Lawrence, O.B.E., Dip.Agr. (Wye), N.D.A.   | } | general<br>agriculture |
| R. W. Kettlewell, B.Sc. (Reading), Dip.Agr. (Cantab.), A.I.C.T.A.   |   |                        |
| C. C. Webster, Ph.D., B.Sc., A.I.C.T.A.   |   |                        |
| A. P. S. Forbes, B.Sc., Dip.Agr. Sc. (Cantab.), A.I.C.T.A.  |   |                        |
| H. W. T. Webb, B.Sc. (McGill), A.I.C.T.A.   |   |                        |
| M. F. H. Selby, B.A., Dip.Agr. (Cantab.), A.I.C.T.A.  |   |                        |
| A. B. Cormack.  |   |                        |
| W. V. Rose, B.A. (Cantab.).   |   |                        |
| D. H. Laycock, B.Sc. (Leeds), A.I.C.T.A.  |   |                        |
| G. Paton, B.Sc., A.I.C.T.A.   |   |                        |
| A. B. Briars, B.Sc. (Leeds), N.D.A.   | } | Soil<br>conservation   |
| W. J. Badcock, Agr. Dip. (Reading), N.D.A., A.I.C.T.A.  |   |                        |
| E. I. H. Sturgeon, B.Sc.  |   |                        |
| G. F. Godden, B.Sc.   |   |                        |

## VETERINARY DEPARTMENT

Blantyre.

|  |        |
|--|--------|
| D. F. Macpherson, M.R.C.V.S., <i>Director of Veterinary Services</i> . | 1      |
| W. J. Gray, M.R.C.V.S., F.R.E.S., <i>Senior Veterinary Officer</i> .   | 17, 18 |
| G. Q. Fowler, M.R.C.V.S., <i>Veterinary Officer</i> .                  | 17, 18 |
| E. G. Barnes, M.R.C.V.S., <i>Veterinary Officer</i> .                  | 17, 18 |
| A. S. Watson, M.R.C.V.S., <i>Veterinary Officer</i> .                  | 17, 18 |

## FORESTRY DEPARTMENT

Limbe.

|   |        |
|---|--------|
| R. G. M. Willan, B.Sc. (Edin.), <i>Assistant Conservator of Forests</i> . | 10, 11 |
| W. E. Lewis, B.Sc. (Bangor), <i>Assistant Conservator of Forests</i> .    | 10, 11 |
| B. R. Fuller, B.Sc. (Lond.), <i>Assistant Conservator of Forests</i> .    | 10, 11 |

## EASTERN

### ADEN

|   |   |
|---|---|
| B. J. Hartley, O.B.E., N.D.A., A.I.C.T.A., <i>Director of Agriculture</i> . | 1 |
|---|---|

### BRUNEI

|   |           |
|---|-----------|
| J. Grant, <i>State Forest Officer</i> .                 | 1, 10, 11 |
| Hamidoon bin Awang Damit, <i>Agricultural Officer</i> . | 1         |



## HONG KONG

## Urban Council

R. H. Robertson, O.B.E., M.R.C.V.S., *Part-time Senior Veterinary Officer*. 1

H. C. Watson, M.R.C.V.S., *Part-time Veterinary Officer*. 1

## Development

R. Hart, *Development Officer* : marketing. 27

## Agricultural Department

T. G. Strangeways, M.A. (Cantab.), *Senior Agricultural Officer*, G.P.O. Building, 1st fl., Hong Kong. 1

N. F. Wright, M.B.E., *Animal Husbandry Officer*, G.P.O. Building, 1st. fl., Hong Kong. 18

## Forestry Department

I. P. Tamworth, M.C., B.A., *Forestry Officer*. 10, 11

## MAURITIUS

## DEPARTMENT OF AGRICULTURE

Reduit.

W. Allan, O.B.E., B.Sc. (Glasgow), A.I.T.C.A. (Trinidad), *Director of Agriculture* : land usage problems. 1

N. Craig, M.Sc. (Durham), *Deputy Director of Agriculture* : soils and manures in relation to sugarcane cultivation. 1, 2

## Sugarcane Research Station

A. de Sornay, B.Sc., I.A.C. (Paris), *Plant Breeder* : sugarcane breeding work. 4

Vacant. *Assistant Plant Breeder*.

Vacant. *Chemist*.

S. M. Feillafé, Dip.Agr. (Maur.), *Assistant Chemist*. 5

H. Evans, Ph.D. (Wales).—On secondment to Trinidad—*Botanist* : physiology of sugarcane and investigation on weed control. 3, 5

E. Rochecouste, B.Sc., Dip.Agr. (Maur.), *Assistant Botanist*. 3, 5

## Sugar Technological Division

S. Staub, A.R.T.C., A.M.I.Mech.E., F.C.S., *Sugar Technologist*. 28

R. Leclézio, *Assistant Sugar Technologist*. 28

## Botanical Division

G. Orian, A.C.R. (Maur.), *Plant Pathologist* : problems relating to the diseases of sugarcane, tobacco and other crops, and of plants in general. 6

Vacant. *Assistant Plant Pathologist*.

## Tobacco Division

Vacant. *Government Tobacco Officer* : selection and general experimental work with tobacco and marketing organization.

## COLONIAL TERRITORIES

Subject

### Agricultural College Division

- J. R. Lagesse, B.Sc., *Registrar and Statistician*: statistical enquiries in connection with sugarcane and other crops. 29

### Agricultural Division

- G. A. North-Coombes, B.Sc. (Reading), *Senior Agricultural Officer*. 1, 3, 7  
A. d'Emmerez de Charmoy, Dip.Agr. (Maur.), *Agricultural Officer*. 3, 7  
E. Lesur, *Agricultural Officer*. 7

### Entomological Division

- J. R. Williams, B.Sc. (Bristol) }  
*Entomologist*. } control of insect pests of local  
A. Moutia, Dip.Agr. (Maur.), } crops; biological control of 19  
F.R.E.S., *Assistant Entom-* } sugarcane and other pests.  
*ologist*. }

### Agricultural Chemistry Division

- R. Lincoln, M.A. (Cantab.), *Chemist*. }  
F. Berchon, Dip.Agr. (Maur.), *Assis-* } general agricultural chem- 2  
*tant Chemist*. } ical investigations.

### Tea Division

- F. O. Sprinks, *Tea Officer*. 1

### Veterinary Research Station

- A Darné, M.R.C.V.S. (Lond.), *Veterinary Surgeon, Senior Veterin-* 13, 16, 21,  
*ary Officer*. 22  
J. G. S. Bennie, Dip.Agr. (Grootfontein, South Africa), *Animal* 8, 14, 15,  
*Husbandry Officer*. 17, 18  
F. E. Lionnet, Docteur Veterinaire (Paris), *Veterinary Officer* (On 17, 18  
leave).  
Y. Lefebure, *Assistant Veterinary Officer*: investigation in con- 17, 18  
nection with diseases of stock and pasturage problems.

## SEYCHELLES

### DEPARTMENT OF AGRICULTURE

- J. N. Milsum, O.B.E., F.L.S., *Director* } 1, 7, 10, 18  
*of Agriculture*. }  
F. Durocher Yvon, Dip.Agr. (Maur.), } general problems  
F.L.S., *Agricultural Officer*. } relating to the 7, 10, 18  
G. Lionnet, Dip.Agr. (Maur.), *Scien-* } agriculture of  
*tific Assistant*. } tropical crops. 2, 24

## SOUTH-EAST ASIA

### FEDERATION OF MALAYA

### DEPARTMENT OF AGRICULTURE

Kuala Lumpur.

#### Administration

- Vacant. *Director of Agriculture, Administrative Officer and Director of Research*.  
A. E. S. McIntosh, B.Sc. (Hons.), Ph.D., *Deputy Director of Agriculture*. 1

**Research Branch**

Subject

R. G. H. Wilshaw, M.A. (Oxon.), B.Sc., A.I.C.T.A., *Chief Research Officer* : in charge of research. 1, 2

**DIVISION OF AGRICULTURE.**

Vacant. *Senior Agricultural Officer (Research)* : in charge of division.

|  |   |              |
|--|---|--------------|
| C. W. S. Hartley, B.A., Dip.Agr.Sci. (Camb.)           | } general investi-<br>gations on field<br>crops and breed-<br>ing of livestock. | 7, 8, 12, 18 |
| D. G. Jones, B.A., Dip.Agr.Sci. (Camb.),<br>A.I.C.T.A. |   |              |
| G. S. Keeping, B.Sc. (Agr.)                            |   |              |
| H. D. Matheson, B.Sc., D.T.A. (Trin.)                  |   |              |

**DIVISION OF CHEMISTRY**

|                                       |  |    |
|---------------------------------------|--|----|
| T. A. Buckley, M.Sc., Ph.D., F.R.I.C. | } general agricultural<br>chemical research. | 24 |
| <i>Senior Chemist.</i>                |  |    |
| Gunn Lay Teik, M.A., <i>Chemist.</i>  |  | 24 |

**DIVISION OF SOILS AND PLANT PHYSIOLOGY.**

|  |   |
|--|---|
| S. G. Willimott, B.Sc., Ph.D. (Cantab.), Ph.D. (Liv.), A.I.C.,<br><i>Senior Chemist</i> : soils. | 2 |
| J. K. Coulter, B.Sc., B.Agr., Dip.Agr.Sci. (Camb.), <i>Chemist</i> : soils.                      | 2 |
| Haji Abdul Wahid bin Haji Jafar : soil problems and general<br>plant nutrition.                  | 2 |

**DIVISION OF ENTOMOLOGY.**

|  |  |    |
|--|--|----|
| H. T. Pagden, M.A., F.R.E.S., <i>Senior Entomologist</i>   | } investigations<br>on insect pests<br>and insecticides. | 19 |
| R. J. A. W. Lever, B.Sc. (Dunelm), D.I.C. (Lond.),<br>A.I.C.T.A., F.L.S., F.R.S.T.M., <i>Entomologist.</i> |  | 19 |
|  |  | 19 |

**DIVISION OF PLANT PATHOLOGY.**

|   |                               |        |
|---|-------------------------------|--------|
| A. Thompson, B.Sc., <i>Senior Plant Pathologist.</i>                  | } general plant<br>pathology. | 20, 22 |
| A. Johnston, B.Sc., A.I.C.T.A., A.L.S., <i>Plant<br/>Pathologist.</i> |                               | 20, 22 |

**DIVISION OF BOTANY.**

|   |   |      |
|---|---|------|
| R. B. Jagoe, B.Sc., <i>Senior Botanist.</i>                               | } selection and breed-<br>ing work on rice, oil<br>palms, coconuts and<br>pineapples. | 3, 4 |
| L. N. H. Larter, B.Sc., A.R.C.S. (Lond.),<br>A.I.C.T.A., <i>Botanist.</i> |   |      |
| E. A. Rosenquist, Dip.Agr.Sci. (Camb.),<br><i>Botanist.</i>               |   |      |
| Vacant. <i>Botanist.</i>  |   |      |
|   |   |      |

**Canning Research**

Vacant.

**Field Branch**

Vacant. *Chief Field Officer* : in charge of Branch.

**SENIOR AGRICULTURAL OFFICERS**

|  |   |
|--|---|
| J. Fairweather, M.B.E., N.D.A., U.D.A. | 1 |
| R. G. Heath, B.Sc. (Agr.), A.I.C.T.A.  | 1 |



## COLONIAL TERRITORIES

Subject

|  |   |
|--|---|
| J. L. Greig, B.Sc., B.Sc. (Agr.).                        | 1 |
| H. H. Tunku Yaacob bin Sultan Abdul Hamid, B.A. (Camb.). | 1 |
| J. R. P. Soper, B.A.                                     | 1 |
| J. R. Curry, Dip.Agr. (Dunelm), N.D.A.                   | 1 |

### AGRICULTURAL OFFICERS

|   |   |
|---|---|
| H. J. Simpson, B.Sc. (Agr.), Dip.Agr. (Wye).            | 1 |
| J. Cook, B.Sc., A.I.C.T.A.                              | 1 |
| H. K. Ashby, B.A., Dip.Agr.Sci. (Camb.)                 | 1 |
| E. J. H. Berwick, B.A., Dip.Agr.Sci. (Camb), A.I.C.T.A. | 1 |
| E. F. Allen, B.A., Dip.Agr.Sci. (Camb.), A.I.C.T.A.     | 1 |
| W. N. Scott, B.Sc., B.Agr., Ph.D., Dip.Imp.Col.         | 1 |
| H. M. James, M.C., Dip.Agr., I.C.T.A.                   | 1 |
| P. G. Coleman, B.A. (Agr.).                             | 1 |
| A. L. Barcroft, B.Sc.                                   | 1 |
| R. Henderson, B.Sc. (Agr.).                             | 1 |

### Economics and Publications Branch

|   |  |        |
|---|--|--------|
| Vacant. <i>Agricultural Economist.</i>                        | } economic investigations ; statistics and publications. | 27, 29 |
| J. J. Holmes, <i>Assistant to the Agricultural Economist.</i> |  |        |

### College of Agriculture, Serdang

|                                   |  |   |
|-----------------------------------|--|---|
| Vacant. <i>Principal.</i>         | } agricultural education and poultry investigations. | 1 |
| O. M. Lee, A.I.Mech.E., A.I.M.A., |  |   |
| F.L.S., <i>Senior Lecturer.</i>   |  |   |
| Vacant, <i>Senior Lecturer.</i>   |  |   |

## THE RUBBER RESEARCH INSTITUTE OF MALAYA

Kuala Lumpur.

### ADMINISTRATION.

|  |   |
|--|---|
| C. E. T. Mann, M.Sc. (Lond.), F.I.R.I., <i>Director.</i> | 1 |
| Vacant, <i>Deputy Director.</i>                          |   |

### STATISTICS SECTION

|  |    |
|--|----|
| H. Fairfield Smith, B.Sc. (Agr.) (Edin.), M.S.A. (Cornell), F.S.S., <i>Statistician.</i> | 29 |
| Fong Chu Chai, R.C.D. (S'pore), <i>Assistant Statistician.</i>                           | 29 |

### SMALL-HOLDERS' ADVISORY SERVICE

|   |   |
|---|---|
| L. R. Davidson, B.Sc. (Agr.) (Edin.), <i>Small-Holders' Advisory Officer.</i>               | 1 |
| J. M. F. Greenwood, B.Sc. (Agr.) (Lond.), <i>Assistant Small-Holders' Advisory Officer.</i> | 1 |

### BOTANICAL DIVISION

|   |      |
|---|------|
| C. C. T. Sharp, <i>Head of Division</i> : breeding and selection of <i>Hevea brasiliensis</i> ; vegetative propagation and study of clones of <i>Hevea</i> ; tapping and field experiments ; general advisory work. | 3, 4 |
|---|------|

## COLONIAL TERRITORIES

|  | Subject       |
|--|---------------|
| E. D. C. Baptist, Ph.D. (Lond.), M.Sc., A.R.C.S., D.I.C., <i>Botanist</i> : nutritional problems ; mineral deficiencies ; stock and scion relationships in Hevea.                          | 2, 3          |
| E. G. B. Gooding, M.A. (Cantab.), <i>Botanist</i> : extension work ; tapping experiments ; latex physiology.   | 3             |
| H. M. Burkill, M.A. (Cantab.), <i>Botanist</i> : general botany ; supervision of field experiments.  | 3             |
| C. W. Brookson, B.Sc. (Lond.), <i>Botanist</i> : breeding and selection of <i>Hevea brasiliensis</i> .   | 4             |
| K. N. Kaimal, B.A. (Madras), <i>Assistant Botanist</i> : tapping experiments ; morphology and anatomy ; ecology.   | 3             |
| T. V. Vaidyanathan, B.Agr. (Bombay), <i>Assistant Botanist</i> : breeding and selection of Hevea.  | 4             |
| <b>CHEMICAL DIVISION.</b>  |               |
| M. W. Philpott, M.Sc. (Lond.), A.R.I.C., F.I.R.I., <i>Head of Division</i> .   | 5, 24         |
| G. W. Drake, B.Sc., M.A. (Oxon.), <i>Physical Chemist</i> : analysis of non-rubber constituents of latex, physico-chemical properties of latex.  | 24            |
| A. Walker, B.Sc. (Lond.), A.R.I.C., <i>Chemical Engineer</i> : engineering aspects of manufacture of raw rubber and concentrated latex ; development of new equipment and processes.       | 24, 28        |
| A. S. Cook, B.Sc. (Glasgow), <i>Organic Chemist</i> : general chemical and technological study of rubber preparation.  | 24            |
| H. C. Baker, M.Sc. (Lond.), A.R.I.C., F.I.R.I., <i>Chemist</i> : Seconded from London Advisory Committee for Rubber Research (Ceylon and Malaya) : technological evaluation of raw rubber. | 24            |
| G. F. Bloomfield, Ph.D. (Lond.), D.I.C., F.R.I.C., <i>Chemist</i> : Seconded from British Rubber Producers' Research Association: chemical study of rubber hydrocarbon.                    | 24            |
| A. I. McMullen, Ph.D. (Cantab.), <i>Chemist</i> : Seconded from British Rubber Producers' Research Association : colloid properties of latex.  | 24, 25        |
| K. C. Sekar, B.A. (Madras), A.I.R.I., <i>Assistant Chemist</i> : analysis of estate chemical and water supplies ; preservation and concentration of latex.                                 | 24            |
| Cheah Sein Liat, B.Sc. (Bombay), <i>Assistant Chemist</i> : analysis of latex ; study of latex enzymes.  | 25            |
| <b>PATHOLOGICAL DIVISION</b>   |               |
| R. A. Altson, B.Sc. (Lond.), A.R.C.S., <i>Head of Division</i> : problems relating to diseases and pests of rubber trees ; general advisory work.  | 6, 19, 20, 22 |
| A. Newsam, Ph.D. (Lond.), <i>Entomologist</i> : pest control on Heavea plantations ; termites, mites and thrips.   | 6, 19         |
| F. W. Hutchison, N.D.A., C.D.A. (Edin.), <i>Field Research Officer</i> : planning and supervision of field experiments.  | 6             |
| R. N. Hilton, B.A. (Cantab.), <i>Pathologist</i> : investigations on leaf diseases of rubber with special references to <i>Helminthosporium heveae</i> .                                   | 6, 20, 22     |
| K. P. John, B.A. (Madras), <i>Assistant Pathologist and General Research Assistant</i> .   | 6, 20         |

SOILS DIVISION

- C. G. Akhurst, B.Sc. (Lond.), A.R.C.S., A.I.C.T.A., *Head of Division* : general problems concerning the nutrition of rubber trees; field experiments on the effects of cover plants and fertilisers on the growth of rubber trees ; soil survey and soil profile studies ; soil nitrogen ; mechanical cultivation methods ; weed control experiments. 2
- G. Owen, M.Sc. (Wales), *Soils Chemist* : soil survey work ; studies of soil phosphates ; leguminous covers ; nitrogen fixation and inoculation ; soil fertility and plant and food requirements of rubber trees ; rubber leaf analysis ; field and pot experiments. 2
- W. H. Williams, M.A., B.Sc. (Aberdeen), D.I.C. (Lond.), *Soils Chemist* : soil survey ; field and laboratory studies on Malayan soils ; field procedure with mechanised methods of cultivation; anti-soil erosion measures ; weed control ; general advisory work in connection with planting, cultivation, and manuring of rubber and associated crops. 2

VETERINARY DEPARTMENT

- W. R. Wallace, D.T.V.M. (Edin.), M.R.C.V.S., *Director of Veterinary Services*. 1
- W. E. Lancaster, M.A. (Cantab.), D.T.V.M. (Edin.), M.R.C.V.S., *Deputy Director of Veterinary Services*. 1
- H. H. Tungku Abu Bakar of Johore, M.R.C.V.S., *Chief Animal Husbandry Officer*. 14, 15, 16, 17, 18
- R. S. T. Bowden, M.R.C.V.S., *Senior Research Officer*. 16, 18, 19, 21, 22, 23

VETERINARY OFFICERS

- R. A. Wright, M.R.C.V.S. 14, 15, 16, 17, 18
- C. C. Renwick, M.R.C.V.S. 14, 15, 16, 17, 18
- J. Davie, B.Sc. (Edin.), M.R.C.V.S. 14, 15, 16, 17, 18
- A. H. Foster, M.R.C.V.S. 14, 15, 16, 17, 18
- M. D. Johari, M.R.C.V.S. 14, 15, 16, 17, 18
- Posts Vacant. Veterinary Officers.
- Posts Vacant. Research Officers.

VETERINARY DEPARTMENT, SINGAPORE

- C. W. Wells, B.Sc. (Lond.), D.T.V.M. (Edin.), M.R.C.V.S., *Chief Veterinary Officer, Singapore*. 1

FOREST RESEARCH INSTITUTE AND TIMBER RESEARCH LABORATORY

- Kepong.
- R. C. Barnard, M.A. (Cantab.) : silviculture. 21
- J. Wyatt-Smith, B.A. (Oxon.) : forest botany. 2
- Vacant : wood technology.
- F. G. Browne, B.Sc. (Edin.) : entomology. 8
- A. V. Thomas, B.Sc., *Timber Research Officer*. 22



## SINGAPORE

## GARDENS DEPARTMENT

Singapore.

Vacant. *Director.*

|   |         |
|---|---------|
| M. R. Henderson, F.L.S., <i>Assistant Director, Acting Director :</i><br>systematic botany of Malayan plants. | 3, 4, 9 |
| J. Sinclair, B.Sc., <i>Curator of the Herbarium :</i> systematic botany of<br>Malayan plants.                 | 3, 9    |
| C. X. Furtado, D.Sc., <i>Assistant Botanist :</i> Malayan palms and<br>aroids.                                | 3, 4, 9 |
| J. W. Ewart, <i>Agricultural Officer, Singapore.</i>  | 4, 9    |

## NORTH BORNEO

|   |    |
|---|----|
| H. G. Keith, B.Sc. (For.), <i>Conservator of Forests.</i>                   | 10 |
| G. S. Brown, B.Sc. (For.) (Edin.), <i>Assistant Conservator of Forests.</i> | 10 |
| F. V. Webster, M.C. (Dehra Dun), <i>Assistant Conservator of Forests.</i>   | 10 |
| J. Agama, <i>Assistant Conservator of Forests.</i>                          | 3  |
| J. W. Jolly, H.D.A., <i>Director of Agriculture.</i>                        | 1  |
| J. K. Cox, R.D.A., R.D.D. (S.A.), <i>Senior Agricultural Officer.</i>       | 1  |
| J. Gordon, B.Sc. (Agr.) (Belfast), <i>Agricultural Officer.</i>             | 1  |
| N. B. Flockhart, B.Sc. (Agr.), <i>Agricultural Officer.</i>                 | 1  |
| S. R. Rippon, M.R.C.V.S., <i>Veterinary Officer.</i>                        | 1  |
| Chan Kwai Shang, B.Sc. (Agr.), <i>Assistant Entomologist.</i>               | 19 |
| J. T. Medrana, D.B.M., <i>Assistant Veterinary Officer.</i>                 | 18 |

## SARAWAK

## DEPARTMENT OF AGRICULTURE

|  |        |
|--|--------|
| R. W. R. Miller, B.A., Dip.Agr.Sci. (Cantab.), <i>Director of Agriculture.</i>                       | 1      |
| O. F. Wright, B.Sc. (Horticulture) (Reading), <i>Agricultural Officer.</i>                           | 12, 18 |
| J. S. Blacklock, Dip.Agr., Dip. Dair. (Glasgow), A.I.C.T.A. (Trinidad), <i>Agricultural Officer.</i> | 12, 18 |
| K. E. H. Kay, <i>Agricultural Officer.</i>   | 12, 18 |

## DEPARTMENT OF FORESTRY

|   |        |
|---|--------|
| B. J. C. Spurway, M.B.E., B.A., Dip.For. (Oxon.), <i>Conservator of Forests.</i>  | 1      |
| J. H. Nelson Smith, B.A. (For.) (Oxon.), <i>Assistant Conservator of Forests.</i>   | 10, 11 |
| B. E. Smythies, B.A. (For.) (Oxon), <i>Assistant Conservator of Forests.</i>  | 10, 11 |
| J. Grant, B.Sc. (For.) (Edin.), <i>Assistant Conservator of Forests,</i><br><i>State Forests Officer, Brunei (On Secondment).</i> | 10, 11 |
| D. Carroll, <i>Assistant Forest Officer.</i>  | 10, 11 |
| F. J. Wright, <i>Assistant Forest Officer.</i>  | 10, 11 |
| L. P. Zehnder, Dip.For. (Rangoon), <i>Assistant Forest Officer.</i>   | 10, 11 |
| H. Crocker, <i>Senior Forest Ranger.</i>  | 10, 11 |

## WEST INDIES

## DEVELOPMENT AND WELFARE ORGANISATION

Barbados, B.W.I.

- A. de K. Frampton, Dip.Agr. (Seale Hayne), *Agricultural Adviser.* 1, 7, 18  
 P. E. Turner, O.B.E., M.Sc. (Lond.), F.R.I.C., *Sugar Agronomist,*  
*on staff of Agricultural Adviser.* 2, 24  
 J. V. Lochrie, O.B.E., B.Sc., N.D.A., A.I.C.T.A., *Cotton Specialist,*  
*on staff of Agricultural Adviser.* 3, 4, 5

## IMPERIAL COLLEGE OF TROPICAL AGRICULTURE

Trinidad.

- H. J. Page, O.B.E., B.Sc., F.R.I.C., *Principal.* 1, 2  
 C. W. Lynn, M.B.E., A.I.C.T.A., Dip.Agr.,  
*Lecturer in Agricultural Advisory and Ex-*  
*ension Methods.* 12, 18  
 Humphrey Webb, N.D.A., C.D.A., *Lecturer in*  
*Animal Husbandry: general animal hus-*  
*bandry problems in the tropics.* } general problems 15, 18  
 L. J. C. Evans, Dip.Agr., A.I.C.T.A., *Lecturer*  
*in Agriculture.* } relating to the 7, 8, 12  
 J. E. Mayne, B.Sc. (Agr.), *Lecturer in Agricul-*  
*culture: crop husbandry in the tropics with*  
*special reference to mechanisation.* } agriculture of 12, 28  
 R. E. D. Baker, M.A., A.I.C.T.A., *Professor of Botany: general*  
*botanical and plant pathological problems in relation to tropical*  
*crops.* } tropical crops 3, 6, 20  
 Jacob Wilson, B.Sc., *Lecturer in Botany: general botanical pro-*  
*blems in relation to tropical crops.* 3  
 F. Hardy, M.A., Dip.Agr., *Professor of Chem-*  
*istry and Soil Science.* } general agricul- 2, 5, 24  
 Howard Lees, Ph.D., B.Sc., A.R.I.C., *Lec-*  
*turer in Chemistry: soil science with special*  
*reference to biochemistry of tropical soils.* } tural chemistry; 2, 25  
 G. Rodrigues, F.I.C., *Lecturer in Chemistry.* } problems in rela-  
 C. Y. Shephard, Ph.D., B.Sc. (Econ.), *Carnegie Professor of Econ-*  
*omics: economics of tropical crop production, especially in re-*  
*lation to cacao, sugar, etc.* } tation to tropical 2, 5, 24  
 A. L. Jolly, Ph.D., N.A., M.Sc., *Lecturer in Economics.* 27  
 T. W. Kirkpatrick, M.A., Dip.Agr., } entomology in relation  
 F.R.E.S., *Professor of Entomology.* } to tropical crops 19  
 E. McC. Callan, B.Sc., A.R.C.S., } and control of insects  
 D.I.C., *Lecturer in Entomology.* }  
 W. T. Dale, B.Sc., *Lecturer in Mycology and Bacteriology: plant*  
*pathological problems in relation to tropical crops.* 20, 22  
 R. D. E. Yearwood, D.I.C.T.A., A.I.C.T.A., *Acting Sugar Tech-*  
*nologist.*  
 Vacant, *Assistant Acting Sugar Technologist.*

Research Schemes

*Banana Research Scheme*

Norman Willison Simmonds, B.A., *Cytogeneticist*. 4

*Cocoa Research Scheme*

Harry Evans, Ph.D., *Senior Plant Physiologist*. 3

Francis William Cope, A.R.C.S., M.Sc., *Plant Breeder*. 4

John Wardman Porteous, Ph.D., B.Sc., *Soil Chemist*. 2, 25

Fred Haworth, Ph.D., B.Sc., A.R.I.C., *Biochemist*. 5, 25

George Edward Laurie Spencer, D.I.C.T.A., *Field Officer*. 12

*Soils Research Scheme*

Kenneth Clapham Vernon, B.Sc., *Soil Surveyor*. 2

Francis Clift Darcel, B.Sc. (Agr.), *Soil Surveyor*. 2

*Sugar Research Scheme*

Leslie Frederick Wiggins, D.Sc., Ph.D., A.T.I.C., *Director of Research*. 5, 24

James Howarth Williams, B.Sc., A.R.C.S., *Senior Organic Chemist*. 24

Mary Jean Nicholls, Ph.D., *Junior Organic Chemist*. 24

Oliver Edmund Pratt, B.Sc., *Junior Organic Chemist*. 24

Alexander Blue, B.Sc., *Chemical Engineer*. 24, 28

BARBADOS

DEPARTMENT OF SCIENCE AND AGRICULTURE

Bridgetown.

S. J. Saint, C.M.G., O.B.E., M.Sc., Ph.D., F.R.I.C. (Lond.), *Director of Agriculture*. 1

M. Halcrow, O.B.E., B.Sc., Dip.Agr., A.I.C.T.A., *Deputy Director of Agriculture*. 1

R. W. E. Tucker, M.A. (Cantab.), B.Ed. (Capetown), *Entomologist* : insect pests of sugarcane and other crops ; general economic zoology. 19

D. M. Hanschell, B.Sc., A.I.C.T.A., *Botanist*. 3, 8, 20

L. R. Hubon, B.V.Sc., D.V.Sc., 16, 21

J. B. D. Robinson, B.Sc., *Chemist*. 2, 15

C. A. Coppin, B.A.Sc. (Toronto), A.R.I.C., *Government Analyst*.

BRITISH WEST INDIES CENTRAL SUGARCANE BREEDING STATION

G. C. Stevenson, B.A., A.I.C.T.A., *Cyto-Geneticist* : cytology, genetics. 4

B. de L. Inniss, B.Sc., A.I.C.T.A., *Botanist* : sugarcane breeding work and plant pathology. 4, 6

N. L. Foster, *Agricultural Assistant*. 4

C. D. Gilkes, *Agricultural Assistant*. 4

E. L. Jones, *Statistical Clerk*. 29



## COLONIAL TERRITORIES

### COLONIAL DEVELOPMENT AND WELFARE SCHEMES

|   | Subject |
|---|---------|
| A. G. Mill, <i>Livestock Officer</i> .                                    | 14, 17  |
| A. D. Herbert, D.I.C.T.A., <i>Assistant Livestock Officer</i> (Seconded.) | 14, 17  |

## BERMUDA

### DEPARTMENT OF AGRICULTURE

AGRICULTURAL STATION, Paget East.

|   |            |
|---|------------|
| W. R. Evans, <i>Director of Agriculture</i> .               | 1          |
| G. R. Groves, <i>Assistant Director of Agriculture</i> .    | 9          |
| E. C. G. Bedford, B.Sc., M.Sc., <i>Plant Pathologist</i> .  | 19         |
| E. R. Earl, B.V.Sc., <i>Government Veterinary Officer</i> . | 13, 14, 15 |

## BRITISH GUIANA

### DEPARTMENT OF AGRICULTURE

|   |                |
|---|----------------|
| H. H. Croucher, B.Sc., A.R.I.C., <i>Director of Agriculture</i> .   | 1              |
| L. D. Cleare, F.R.E.S., <i>Deputy Director of Agriculture</i> .   | 1, 19          |
| H. Paul, B.Sc., A.R.I.C., <i>Agricultural Chemist</i> .   | 2, 5, 24       |
| V. O. Ferrer, M.Sc., D.I.C.T.A., <i>Agricultural Economist</i> .  | 27, 29         |
| G. B. Kennard, A.I.C.T.A., <i>Marketing Officer</i> .   | 1, 27          |
| E. I. Hugh, M.Sc., D.I.C.T.A., <i>Livestock Officer</i> : cattle breeding with special emphasis on Holstein-Zebu, animal nutrition. | 8, 14, 15, 17  |
| W. Uruski, M.R.C.V.S., <i>Veterinary Officer</i> : disease investigation, and control, animal breeding.                             | 13, 14, 16, 17 |
| St. G. C. Cooper, A.I.C.T.A. } At experimental stations special-  | 1              |
| L. H. Lord, M.Sc., D.I.C.T.A. } ising on crops and varieties most   |                |
| O. F. Churaman, D.I.C.T.A. } suited to local conditions.  |                |

### FOREST DEPARTMENT

|   |    |
|---|----|
| C. Swabey, B.Sc., <i>Conservator of Forests</i> .   | 1  |
| D. B. Fanshawe, B.A., <i>Senior Assistant Conservator of Forests</i> : botany ; ecology ; silviculture. | 10 |
| M. E. R. Taylor, <i>Assistant Conservator of Forests</i> : forest management.                           | 10 |
| N. G. Lechmere-Guppy, B.A., <i>Assistant Conservator of Forests</i> : botany ; ecology ; silviculture.  | 10 |

## BRITISH HONDURAS

### DEPARTMENT OF AGRICULTURE

|   |    |
|---|----|
| C. W. L. Fishlock, B.Sc. (Agr.), A.I.C.T.A., <i>Director of Agriculture</i> . | 1  |
| G. A. Southwell, D.I.C.T.A., <i>Assistant Agricultural Officer</i> .          | 12 |
| M. P. Benjamin, D.I.C.T.A., <i>Assistant Agricultural Officer</i> .           | 12 |
| D. D. Haynes, F.R.H.S., F.R.S.A., <i>Agricultural Instructor</i> .            | 12 |
| S. A. W. Boyd, D.I.C.T.A., <i>Junior Agricultural Instructor</i> .            | 12 |
| P. G. Everett, V.S. (Toronto), <i>Veterinary Officer</i> .                    | 16 |

**FOREST DEPARTMENT**

|  |        |
|--|--------|
| A. F. A. Lamb, B.Sc. (For.) (Edin.), <i>Conservator of Forests.</i>                    | 1      |
| D. W. D'Silva, M.C., Dip. (For.) (Dehra Dun), <i>Assistant Conservator of Forests.</i> | 10, 11 |
| S. L. Finding, B.Sc. (For.) (Wales), <i>Assistant Conservator of Forests.</i>          | 10, 11 |

**JAMAICA**

**DEPARTMENT OF AGRICULTURE**

Kingston.

|  |   |
|--|---|
| A. E. Trotman, N.D.A., C.D.A., A.I.C.T.A., Dip. Rural Economy (Oxon.), <i>Director of Agriculture.</i> | 1 |
| J. Wright, B.Sc. (Hons.), A.I.C.T.A., <i>Deputy Director of Agriculture. (Research).</i>               | 1 |
| Vacant. <i>Deputy Director of Agriculture (Extension Services).</i>                                    |   |
| Vacant. <i>Deputy Director of Agriculture (Veterinary Services).</i>                                   |   |

**STATION AND FIELD RESEARCH.**

|  |   |
|--|---|
| J. B. Sutherland, <i>Senior Agricultural Officer.</i>                          | 1 |
| E. J. Gregory, Dip.Agr. (Wye), A.I.C.T.A., <i>Senior Agricultural Officer.</i> | 1 |
| C. D. F. Hutchings, B.S.A., <i>Senior Agricultural Officer.</i>                | 1 |
| E. A. Tai, M.Sc., D.I.C.T.A., <i>Senior Agricultural Officer.</i>              | 1 |
| Vacant. <i>Senior Agricultural Officer.</i>                                    |   |
| Vacant. <i>Soil Conservation Officer.</i>                                      |   |
| A. M. Pratt, <i>Coffee Officer.</i>  | 1 |
| W. K. Mitchell, D.I.C.T.A., <i>Agricultural Officer, Grade I.</i>              | 1 |
| B. F. Topper, M.A., <i>Agricultural Officer, Grade I.</i>                      | 1 |
| W. G. Stuart, D.I.C.T.A., <i>Agricultural Officer, Grade I.</i>                | 1 |
| L. A. Powell, <i>Agricultural Officer, Grade I.</i>                            | 1 |
| D. A. R. Campbell, B.Sc., <i>Agricultural Officer, Grade II.</i>               | 1 |
| J. H. Haughton, D.I.C.T.A., A.I.C.T.A., <i>Agricultural Officer, Grade II.</i> | 1 |
| R. E. Osborne, D.I.C.T.A., <i>Agricultural Officer, Grade II.</i>              | 1 |
| M. St. C. Motta, D.I.C.T.A., <i>Junior Agricultural Officer, Grade I.</i>      | 8 |
| A. G. Naylor, D.I.C.T.A., <i>Junior Agricultural Officer, Grade I.</i>         | 6 |

**LABORATORIES AND FIELD RESEARCH**

|  |        |
|--|--------|
| E. B. Martyn, B.A., D.I.C.T.A., <i>Plant Pathologist.</i>                | 6      |
| H. P. Hansen, Dr.Agro., M.A., B.A., <i>Plant Pathologist (Coconuts).</i> | 6, 22  |
| Vacant. <i>Plant Pathologist (Bananas).</i>                              |        |
| W. H. Edwards, F.R.E.S., D.I.C., Dip.Agr., <i>Entomologist.</i>          | 19     |
| T. O. Ellis, B.Sc., A.R.I.C., <i>Senior Agricultural Chemist.</i>        | 2      |
| P. A. Chan Choong, B.Sc. (Hons.); A.I.C.T.A., <i>Senior Botanist.</i>    | 4      |
| W. D. Burrowes, B.A., <i>Agricultural Statistician.</i>                  | 27, 29 |
| R. K. Richardson, B.Sc., <i>Agricultural Chemist.</i>                    | 2      |
| C. W. Hewitt, D.I.C.T.A., <i>Agricultural Chemist.</i>                   | 2      |

**VETERINARY SERVICES AND ANIMAL HUSBANDRY**

|   |        |
|---|--------|
| P. D. L. Guilbride, B.Sc., M.R.C.V.S., <i>Senior Veterinary Officer.</i>  | 1, 16  |
| R. M. Arnold, B.Sc., M.R.C.V.S., <i>Veterinary Investigation Officer.</i> | 15, 16 |

## COLONIAL TERRITORIES

|  |           |
|--|-----------|
|  | Subject   |
| R. C. Glover, M.R.C.V.S., <i>Veterinary Officer.</i>     | 1, 16     |
| D. L. Diamond, D.V.M., <i>Veterinary Officer.</i>        | 1, 16     |
| T. P. Lecky, B.S.A., <i>Senior Livestock Officer.</i>    | 1, 14, 17 |
| D. W. Rodriguez, M.Sc., B.A., <i>Poultry Specialist.</i> | 1, 18     |

### DEPARTMENT OF FORESTRY

|   |           |
|---|-----------|
| E. W. March, M.A., <i>Conservator of Forests.</i>                                 | 1, 10, 11 |
| E. M. Brown, <i>Assistant Conservator of Forests.</i>                             | 10, 11    |
| L. V. Burns, B.A. (Hons.) (Oxon), <i>Junior Assistant Conservator of Forests.</i> | 3, 10, 11 |
| W. A. P. Snaith, <i>Forest Settlement Officer.</i>                                | 10        |
| J. H. Sparkes, <i>District Supervisor.</i>  | 10        |
| H. H. Henry, <i>District Supervisor.</i>  | 10        |
| T. B. Scott, <i>District Supervisor.</i>  | 10        |

### DEPARTMENT OF THE GOVERNMENT CHEMIST

|  |              |
|--|--------------|
| W. L. Barnett, M.A., B.Sc., F.R.I.C., <i>Government Chemist.</i> | 5, 8, 24, 25 |
| N. Kirby, B.Sc., A.R.I.C., <i>Deputy Government Chemist.</i>     | 24           |

## LEEWARD ISLANDS

|  |                 |
|--|-----------------|
| R. B. Allnutt, B.Sc. (Agr.) (Lond.), <i>Director of Agriculture.</i> | 2, 7, 8, 14, 17 |
|--|-----------------|

### Antigua

|   |                     |
|---|---------------------|
| C. A. S. Hynam, D.I.C.T.A., <i>Agricultural Superintendent : peasant development studies.</i> | 2, 7, 8, 14, 15, 17 |
| E. R. H. Martin, D.I.C.T.A., <i>Assistant Agricultural Superintendent.</i>                    | 2, 7, 8             |

### St. Kitts-Nevis

|  |              |
|--|--------------|
| R. E. Kelsick, <i>Agricultural Superintendent.</i> | 2, 7, 14, 17 |
|--|--------------|

### Montserrat

|  |      |
|--|------|
| W. E. Bassett, M.B.E., <i>Agricultural Superintendent.</i> | 4, 7 |
|--|------|

### Virgin Islands

|  |   |
|--|---|
| Malcolm Winter, <i>Agricultural Assistant.</i> | 1 |
|--|---|

## TRINIDAD AND TOBAGO

### DEPARTMENT OF AGRICULTURE

|  |   |
|--|---|
| Port of Spain  |   |
| E. W. Leach, B.Sc. (Agr.), A.I.C.T.A., <i>Director of Agriculture</i>                                    | 1 |
| C. H. B. Williams, M.A., A.I.C.T.A., D.I.C.T.A., <i>Deputy Director of Agriculture : crop husbandry.</i> | 1 |
| H. V. M. Metivier, O.B.E., B.Sc., M.R.C.V.S., <i>Deputy Director of Agriculture : animal husbandry.</i>  | 1 |
| Vacant. <i>Chief Scientific Officer.</i>   |   |
| Vacant. <i>Senior Agricultural Officer.</i>  |   |



## COLONIAL TERRITORIES

Subject

19

|   |                |
|---|----------------|
| R. G. Fennah, M.A., A.I.C.T.A., <i>Entomologist</i> .                             |                |
| Vacant. <i>Plant Pathologist</i> .  |                |
| Vacant. <i>Soil Chemist</i> .   |                |
| B. G. Montserin, Ph.D., M.Sc., B.S.A., <i>Cocoa Agronomist</i> .                  | 9              |
| Vacant. <i>Marketing and Co-operative Officer</i> .                               |                |
| D. B. Murray, B.A. (Cantab.), A.I.C.T.A., <i>Economic Botanist</i> .              | 3              |
| T. A. des Iles, D.V.M., B.V.Sc., <i>Veterinary Officer</i> .                      | 14, 15, 16, 17 |
| A. V. Hall, D.V.M., D.V.P.H., <i>Veterinary Officer</i> .                         | 1              |
| J. L. Shannon, D.V.M., <i>Veterinary Officer (Temporary)</i> .                    | 1              |
| S. P. Bennett, D.V.M., <i>Veterinary Officer (Part-time)</i> .                    | 1              |
| M. N. Lucie-Smith, M.A., B.Sc. (Agr.), A.I.C.T.A., Dip. Agr., <i>Agronomist</i> . | 7, 8, 12       |
| E. G. Benson, B.Sc., A.I.C.T.A., Dip. Agr., <i>Agricultural Officer</i> .         | 1              |
| F. D. Davies, <i>Agricultural Officer</i> .                                       | 1              |
| G. P. Blair, B.Sc., D.I.C.T.A., <i>Agricultural Officer</i> .                     | 1              |
| J. F. Bell, B.Sc. (Agr.), <i>Agricultural Officer</i> .                           | 1              |
| R. Barrie-Smith, B.Sc., Dip. Agr., <i>Agricultural Officer</i> .                  | 1              |
| Vacant. <i>Agricultural Officer</i> .   |                |
| R. Ross, <i>Manager, St. Augustine Station</i> .                                  | 1              |
| G. C. Witt, B.Sc., A.R.C.S., <i>Soil Survey Officer</i> .                         | 2              |
| D. H. Constable, M.Sc., B.Sc., A.R.C.S., D.I.C., <i>Soil Survey Officer</i> .     | 2              |
| Vacant. <i>Sugar Agronomist</i> .   |                |
| Vacant. <i>Veterinary Officers (2)</i>  |                |

## WINDWARD ISLANDS

### Saint Lucia

|  |   |
|--|---|
| S. A. Schouten, D.I.C.T.A., <i>Agricultural Superintendent</i> . | 1 |
|--|---|

### Grenada

|  |   |
|--|---|
| G. B. Gregory, Dip. Agr., I.C.T.A., <i>Agricultural Superintendent</i> . | 1 |
|--|---|

### Dominica

|   |   |
|---|---|
| L. L. de Verteuil, D.I.C.T.A., <i>Agricultural Superintendent</i> . | 1 |
|---|---|

### Saint Vincent

|   |   |
|---|---|
| M. A. G. Hanschel, B.A., D.I.C.T.A., <i>Agricultural Superintendent</i> . | 1 |
|---|---|

## MEDITERRANEAN

## CYPRUS

## DEPARTMENT OF AGRICULTURE

|   |              |
|---|--------------|
| Vacant, <i>Director of Agriculture</i> .  | 1            |
| H. Hirst, M.Sc., Dip. Agr. (Cantab.), N.D.A., N.D.D., <i>Assistant Director of Agriculture</i> .                  | 1            |
| H. M. Morris, M.Sc., F.R.E.S., <i>Entomologist : entomological and sericultural investigations</i> .              | 19           |
| L. J. S. Littlejohn, B.Sc. (Hons.), A.I.C.T.A., <i>Soil Conservation Officer : agronomy ; soil conservation</i> . | 7, 8, 12, 26 |

## COLONIAL TERRITORIES

|   |                        |
|---|------------------------|
|   | Subject                |
| G. Corbett, <i>Agricultural Officer, Tobacco Officer</i> : tobacco investigations.  | 4, 12                  |
| C. C. Parisinos, B.Sc., A.I.C.T.A., <i>Agricultural Officer. In charge of Central Experimental Farm.</i>                    | 7, 8, 12               |
| P. A. Loizides, Ph.D., B.Sc. (Hons.), <i>Agricultural Chemist</i> : general chemistry ; soil and manures.                   | 2, 5, 24               |
| Vacant. <i>Seed Production Officer</i> : production of commercial seed.   |                        |
| P. Chr. Antoniadès, I.A. (M.I.), C.M.A. (Fs.), <i>Viticulturist and Wine Expert</i> : vine and wine problems.               | 12                     |
| R. J. Roe, O.B.E., M.R.C.V.S., D.V.S.M., <i>Chief Veterinary Officer</i> : general veterinary and livestock investigations. | 13, 14, 15, 16, 17, 22 |
| R. W. Crowther, B.Sc., M.R.C.V.S., <i>Veterinary Research Officer</i> : veterinary pathology and helminthology.             | 13, 16, 21, 22         |
| Vacant. <i>Veterinary Officer</i> : general veterinary pathological investigations.   |                        |
| K. W. Richards, N.D.A., N.D.D., <i>Livestock Officer</i> : animal breeding ; production and management.                     | 14, 17, 18             |
| Miss D. P. Eeles, N.D.P., C.D.P., <i>Poultry Officer</i> : poultry husbandry.   | 18                     |

## FOREST DEPARTMENT

|   |    |
|---|----|
| Nicosia.  |    |
| R. R. Waterer, C.B.E., M.A., Dip. For. (Cantab.), <i>Conservator of Forests.</i>  | 1  |
| G. W. Chapman, M.B.E., B.A., Dip. For. (Cantab.), <i>Assistant Conservator of Forests</i> : forest management problems and erosion and water catchment investigations. (Seconded for duty in Iraq for a period of 3 years). | 10 |
| E. H. Probyn, M.A. (For.) (Oxon.), <i>Assistant Conservator of Forests</i> : management ; erosion and water catchment investigation.  | 10 |
| W. A. Gordon, M.A. (For.) (Oxon.), Dip. in Anthropology (Oxon.), Barrister-at-Law, Inner Temple, <i>Assistant Conservator of Forests</i> : general investigations relating to local silvicultural problems.                 | 10 |
| D. F. Davidson, B.Sc. (For.) (Aberdeen), <i>Assistant Conservator of Forests</i> : general investigations relating to local silvicultural problems.   | 10 |
| I. Sidki, B.Sc. (For.) (Edin.), <i>Assistant Conservator of Forests, Working Plans Officer</i> : general investigations relating to local silvicultural problems.   | 10 |
| T. A. Couppis, B.A. (For.) (Oxon.), <i>Assistant Conservator of Forests</i> : general investigations relating to local silvicultural problems.  | 10 |

## MALTA

### DEPARTMENT OF AGRICULTURE

|   |   |
|---|---|
| Valetta.  |   |
| R. Biasini, <i>Director of Agriculture.</i>   | 1 |
| S. J. Zammit, <i>Superintant Government Farm</i>  | 1 |
| G. J. Peralta, D.Sc. (Agr.), F.Z.S., <i>Plant Pathologist</i> : general pathological and entomological investigations in connection with Maltese Agriculture. | 6 |

|  |               |
|--|---------------|
| A. Azzopardi, A. and C.E., D.Sc. (Agr.) (Naples), B.E.A., <i>Controller of Agricultural Marketing</i> : economic investigations in relation to marketing of Maltese crops. | Subject<br>27 |
| T. E. Gatt Rutter, B.Sc., M.R.C.V.S., <i>Principal Government Veterinary Surgeon</i> .   | 1             |
| A. Cassar, B.Sc., B.V.Sc., M.R.C.V.S.  | 14, 15, 18    |
| E. J. Ebeyer Slythe, C.D.D. (Mids.), <i>Livestock and Dairy Officer</i> .  | 14, 15        |
| G. Cousin, <i>Superintendent of Public Gardens</i> .   | 1             |
| J. Debrincat, <i>Agricultural Officer, Gozo</i> .  | 1             |

## PACIFIC

### BRITISH SOLOMON ISLANDS PROTECTORATE

|   |        |
|---|--------|
| D. A. Donald, H.D.A., <i>Senior Agricultural Officer</i> .                      | 1      |
| John J. C. Suckling, Dip. (Massey College, N.Z.), <i>Senior Agriculturist</i> . | 12, 18 |
| A. R. McNabb, <i>Agricultural Assistant</i> .                                   | 12, 19 |

## FIJI

### DEPARTMENT OF AGRICULTURE

|  |                        |
|--|------------------------|
| Suva.  |                        |
| C. Harvey, B.Sc. (Agr.), A.I.C.T.A., <i>Director of Agriculture</i> .  | 1                      |
| W. J. Blackie, M.Sc. (N.Z.), F.R.I.C., F.N.Z.I.C., Mem.Soc.Pub. Anal., <i>Deputy Director of Agriculture</i> .                           | 1                      |
| P. L. R. Charlton, B.Sc. (N.Z.), A.N.Z.I.C., <i>Chemist</i> .  | 24                     |
| C. R. Turbet, B.V.Sc. (Syd.), M.R.C.V.S., F.R.S.T.M., <i>Senior Veterinary Officer</i> : general veterinary administration and practice. | 14, 15, 16, 17, 18, 21 |
| K. J. Garnett, B.V.Sc. (Syd.) : general veterinary practice and field investigations.  | 16, 21                 |
| W. J. A. Payne, B.Sc., Ph.D., <i>Animal Husbandry Officer</i> : investigational work on livestock management and nutrition.              | 14, 15, 17, 18         |
| B. E. V. Parham, M.A., <i>Senior Agricultural Officer</i> : direction of field extension ; economic botany.                              | 6, 7, 8, 9, 12, 20     |
| L. W. Harwood, H.D.A., <i>Agricultural Officer</i> : field extension duties.   | 7, 8                   |
| M. D. French-Mullen, A.I.C.T.A., <i>Agricultural Officer</i> : agronomical investigation.  | 7, 8, 9, 12            |
| R. R. Mason, B.Sc. (Agr.) (Lond.), N. D.A., <i>Agricultural Officer</i> : field extension duties.  | 7, 8                   |
| N. Lamont, M.Agr.Sc. (N.Z.), <i>Agricultural Officer</i> : economic botany ; pastures and crops.   | 4, 7, 8, 9, 12         |
| B. A. O'Connor, B.Sc. Agr., B.A., <i>Entomologist</i> .  | 19                     |

### DEPARTMENT OF FORESTRY

|  |           |
|--|-----------|
| Suva.  |           |
| J. C. K. Marshall, M.A. (Oxon.), <i>Conservator of Forests</i> . | 1, 10, 11 |



**SOUTH ATLANTIC**

**FALKLAND ISLANDS**

J. P. Oliver, *Agricultural Officer.*

1

**ST. HELENA**

Vacant. *Agricultural and Forestry Officer.*

**SOUTH AFRICAN HIGH COMMISSION TERRITORIES**

**BASUTOLAND**

J. G. M. King, M.B.E., C.D.A. (Wye), A.I.C.T.A., *Director of Live-stock and Agricultural Services.*

1

P. A. Bowmaker, B.Sc., Dip.Agr. (Wye), A.I.C.T.A., *Principal Agricultural Officer.*

1

E. T. Fern, M.R.C.V.S., *Principal Veterinary Officer.*

1

L. H. Collett, M.B.E., *Soil Conservation Officer.*

1

**BECHUANALAND PROTECTORATE**

**Veterinary**

P.O. Box 106, Mafeking, Cape Province, Tel. : Mafeking 38.

E. C. S. Dawe, M.R.C.V.S., *Director of Veterinary Services.*

1

N. H. Boardman, B.V.Sc. (Pretoria), *Acting Director of Veterinary Services.*

17

A. S. Erasmus, B.V.Sc. (Pretoria), *Veterinary Officer.*

17

P. Casserly, M.R.C.V.S., *Veterinary Officer.*

17

M. S. Reichert, M.R.C.V.S., D.M.V. (Lwow), *Veterinary Officer.*

17

G. A. Alford, M.R.C.V.S., *Veterinary Officer.*

17

D. L. Kelly, M.R.C.V.S., *Veterinary Officer.*

17

F. H. Bosman, B.Sc., M.Sc.

1

**Agriculture**

P.O. Box 10, Mahalapye, Bechuanaland Protectorate.

F. H. Bosman, M.Sc.Agr., *Director of Agriculture.*

1, 2, 4, 7, 8

I. S. Hutcheson, B.Sc., *Agricultural Officer.*

2, 4, 7, 8

**Forestry**

Pharing, P.O. Kanye, via Lobatsi, Bechuanaland Protectorate.

O. B. Miller, *Forest Officer.*

1, 10, 11

**EMPIRE COTTON GROWING CORPORATION**

The Most Hon. The Marquess of Linlithgow, K.G., *President.*

1

James Littlewood, *Chairman.*

1

## London Office

1a Harrington Road, South Kensington, London, S.W.7. (Tel : Kensington 9942).

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| M. H. White, M.A., <i>Assistant Secretary</i> .                       | 1 |
| W. Nowell, C.M.G., C.B.E., D.I.C., <i>Editor of Journal</i> .         | 1 |

## Africa

## CENTRAL COTTON RESEARCH STATION, Uganda.

|  |                       |         |
|--|-----------------------|---------|
| J. B. Hutchinson, C.M.G., Sc.D., M.A., <i>Director</i> . |                       | 1, 4    |
| D. MacDonald, B.Sc., A.I.C.T.A.                          | } plant breeding      | 4       |
| H. L. Manning, M.Sc., Dip. I.C.T.A.                      |                       |         |
| A. N. Prentice, B.Sc., A.I.C.T.A.                        | } crop husbandry      | 2, 3, 8 |
| H. G. Farbrother, B.Sc.                                  |                       |         |
| E. O. Pearson, B.A., A.I.C.T.A.                          | } insect pest control | 19      |
| R. C. Rainey, Ph.D., B.Sc., A.R.C.S., D.I.C.             |                       |         |
| G. M. Wickens, Ph.D., B.Sc. : plant pathology.           |                       | 6       |
| A. H. Fish, M.B.E., F.C.I.S., <i>Secretary</i> .         |                       | 1       |
| A. L. Stephens, M.B.E., <i>Farm Manager</i> .            |                       | 1       |
| B. E. M. Petit, <i>Assistant Farm Manager</i> .          |                       | 1       |

## ANGLO-EGYPTIAN SUDAN

Attached to Ministry of Agriculture, Agricultural Research Division.

## WAD MEDANI

|                     |   |   |
|---------------------|---|---|
| R. R. Anson         | } plant breeding and field experiments. | 4 |
| K. C. Barlow, B.Sc. |   |   |

## SHAMBAT

|   |   |
|---|---|
| R. L. Knight, D.Sc., Ph.D., A.I.C.T.A., <i>Senior Economic Geneticist</i> . | 4 |
| J. E. W. Sadd, B.Sc., <i>Junior Economic Geneticist</i> .                   | 4 |
| H. Douwes, D.Sc. (Gron.), <i>Cyto-Geneticist</i> .                          | 4 |
| R. L. Cuany, B.A., <i>Cyto-Geneticist</i> .                                 | 4 |

## KADUGLI,

|  |   |
|--|---|
| M. F. Rose, B.A., A.I.C.T.A. : plant breeding. | 4 |
|--|---|

## TANGANYIKA

## UKIRIGURU P.O. FELA, LAKE PROVINCE

|                               |   |   |
|-------------------------------|---|---|
| J. E. Peat, B.Sc., A.I.C.T.A. | } plant breeding and field experiments. | 4 |
| J. M. Munro, B.Sc.            |   |   |

## ILONGA, EASTERN PROVINCE

|   |       |
|---|-------|
| A. G. Bebbington, B.Sc. : plant breeding and insect pest control. | 4, 19 |
| H. J. de S. Disney, B.A. : insect pest control.                   | 19    |

## NYASALAND

## COTTON EXPERIMENT STATION, P.O. SALIMA.

|                             |   |   |
|-----------------------------|---|---|
| H. C. Ducker, B.Sc., N.D.A. | } plant breeding and field experiments. | 4 |
| W. L. Miller                |   |   |
| S. H. Evelyn, Dip. I.C.T.A. |   |   |
| M. S. Hastie, B.Sc.         |   |   |

# COLONIAL TERRITORIES

Subject

## NIGERIA

### SAMARU, ZARIA

H. E. King, B.Sc., Dip.Agr. : plant breeding.

4

Q. A. Geering, B.A., insect pest control.

19

## West Indies

### COTTON EXPERIMENT STATION, ANTIGUA

J. V. Lochrie, O.B.E., B.Sc. N.D.A., A.I.C.T.A., *Cotton Officer for the* 1, 4  
*West Indies* : plant breeding and field experiments.



# ANGLO-EGYPTIAN SUDAN

## MINISTRY OF AGRICULTURE

Subject

### Administrative

|   |   |    |
|---|---|----|
| J. Smith, D.Sc., B.Sc. (For.), <i>Director</i>  | } responsible for policy.   | 1  |
| J. B. Stewart, Dip.Agr. (Edin.), <i>Deputy Director</i> .   |   |    |
| J. W. Hewison, N.D.A.,<br>Dip.Agr. (Reading),<br><i>Assistant Director</i> :<br>administration.   | } in close touch with administrative field 7, 8, 12, 13,<br>experimental and development work.  | 29 |
| H. Lyon, B.Sc. (Bio-<br>chem), <i>Deputy Assistant Director</i> : admin-<br>istration.  |   |    |
| A. P. Milne, M.A., B.Comm.,<br>B.Sc. (Agr.), <i>Assistant Director</i> : business.  | } Besides general responsibility for<br>the Ministry's business undertak- 7, 12, 17,<br>ings (especially cotton) are also 27, 29, 30<br>specifically concerned with agricul-<br>ture in the Gash Delta. |    |
| W. Buchanan, B.Sc. (Agr.),<br>N.D.A. (Glasg.), <i>Deputy Assistant Director</i> : busi-<br>ness.  |   |    |
| A. G. McCall, B.Sc. (Agr.), N.D.A., <i>Secretary, Equatoria Projects Board</i> : administrative and development work in connection<br>with projects and boards. | 7, 8, 18, 27,<br>29   |    |
| Hussein Abdel Rahman, <i>Deputy Assistant Director (Agriculture)</i> :<br>personal assistant to Minister and concerned generally with ex-<br>tension work.      | 12, 14, 27,<br>29   |    |

### FIELD DIVISION

#### Agricultural Inspectors

|  |   |  |
|--|---|--|
| G. H. Bacon, M.A.,<br>Dip.Agr. (Cantab.),<br>Mohamed Awam<br>Nimr.   | } seconded to the Gezira Executive Com-<br>mittee and concerned specifically with the 2, 4, 6, 7<br>organisation and development of the 27<br>Gezira Scheme (cotton growing).   |  |
| J. R. Thomson, B.Sc. (Agr.), B.Sc., <i>Senior Inspector</i> : in general<br>control of White Nile Schemes, and of Sennar and Fung Areas,<br>also Blue Nile Pump Schemes: |   |  |
| C. V. Pike, B.Sc. (Agr.),<br>N.D.D., <i>Senior In-<br/>spector</i> .   | } developing at Abdel Magid in the Gezira<br>a small holdings scheme as an alterna-<br>tive livelihood for people who formerly<br>occupied land now covered by the 2, 7, 12,<br>Gebel Aulia Reservoir on the White 18<br>Nile. The scheme is irrigated by canal<br>from the Blue Nile dam at Sennar from<br>July to March, and <i>has about 10'' of rain</i><br><i>annually</i> . |  |
| J. F. Milne, Dip.Agr.,<br>(Glasg.), N.D.D.   |   |  |

- G. C. O'Farrell, B.A., } developing pump-irrigated small holdings  
(Oxon.). } schemes on the White Nile at Dueim, Um  
T. Stephenson, } Gerr, Fatisa, Hashaaba Wad Nimr and  
N.D.A., C.D.A. } Gondal as an alterantive livelihood 2, 7, 12,  
for people whose former land is now 18, 27  
covered by the Gebel Aulia Reservoir.  
} *Rainfall is about 5'' annually.*
- R. Newsham, B.Sc. (Agr.) : concerned with the rural development 2, 7, 12, 18  
of the Sennar and Fung district, which has an annual rainfall of  
about 15'' to 30'' and through which the Blue Nile, Rahad and  
Dinder rivers flow.

*Equatoria Province.*

- K. L. Lea-Wilson, B.A. }  
(Cantab.), A.I.C.T.A. }  
J. R. Catford, B.Sc. (St. } in addition to large scale extension and  
And.), Dip.Agr. (Can- } development schemes are responsible 2, 4, 7, 8,  
tab.). } for local experimental programmes in 18, 27, 29  
T. A. T. Leitch, N.D.D., } their respective areas all of which are  
C.D.A., C.D.D. (Glas.) } within rain belt.  
R. C. Wilkinson, D.Sc. }  
Abdel Rahim Bayoumi. }  
R. W. Woods, B.Sc., }  
(Agr.), N.D.A., N.D.D. }

*Bahr El Ghazal Province*

- J. H. Sherwood, B.A., Dip.Agr. (Oxon.), *Senior Inspector* : de- 2, 4, 7, 8,  
velopment work in rainland belt, particularly with improvement 18  
of standards of subsistence farming in an isolated area.
- C. H. Richards, B.Sc., }  
A.R.C.S., *Manager,* }  
*Gash Board.* }  
J. Steven, B.Sc. (Agr.), } concerned with agricultural problems  
N.D.D., *Senior In-* } in the Gash Delta which is peculiar in  
*spector, Gash Delta.* } that the land is watered by spates of 2, 7, 8, 12,  
M. F. Merchant, N.D.A., } the river which flows for a few weeks 18, 27, 29  
N.D.D. } only each year the delta being outside  
A. Simpson, N.D.A., } the rain belt.  
C.D.A. }  
D. B. Casey, B.Sc. (Agr.) }  
Ahmed Rahma. }
- W. A. Porter, N.D.A., }  
Dip. Agr. (Glasg.), } concerned with agricultural problems in  
*Senior Inspector,* } Tokar Delta which is flood irrigated by 2, 7, 8, 12,  
*Tokar.* } spates of the River Baraka, during a few 18, 27, 29  
S. M. Blakemore, } weeks each year, the delta being outside  
N.D.A., Dip.Agr. } the rain belt.  
(Harper Adams). }

*Mechanised Crop Production Scheme, Ghadambaliya*

|   |  |                            |
|---|--|----------------------------|
| R. G. Laing, B.Sc (Agr.),<br>N.D.D., <i>Senior Inspector.</i>   | concerned with production of grain by extensive mechanised farming in an area near Gedaref in Kassala Province, which has about 20" rain annually.                                     | 2, 7, 8, 12,<br>18, 27, 29 |
| J. Cranston, Dip.Agr.,<br>(Durham).   |  |                            |
| J. R. H. McCallum,<br>B.Agr. (Q.J.B.), Dip.<br>Agr. (Cantab.).  |  |                            |
| T. C. Lister.   |  |                            |
| Wadie Habashi : supervision and development of Pump Schemes in Khartoum Province and encouragement of market gardening.   |  | 7, 9, 18                   |
| F. J. Smart, B.A., Dip.Agr. (Cantab.)<br>A.I.C.T.A., <i>Senior Inspector.</i>   | in general control of Kordofan agriculture including the Abu Hahl flood irrigation scheme and the Nuba Mountains rainland stations.  | 2, 7, 8, 18,<br>27, 29     |
| D. Watt-Smyth.  |  |                            |
| L. S. Todd, B.Sc. (Agr.).   |  |                            |
| W. K. Boyd, B.Sc. (Agr.) (Glas.)  |  |                            |
| J. W. Hext, B.A., Dip.Agr. (Cantab.).   | concerned with the development of peasant agriculture by irrigation in the pump schemes and by flood in the basins of the Nile in Northern Province, where the rainfall is negligible. | 2, 7, 8, 18,<br>27, 29     |
| C. B. Metcalfe, B.Sc. (Agr.),<br>A.A.I., <i>Senior Inspector.</i>   |  |                            |
| J. S. Manton, B.Sc. (Agr.),<br>Dip.Agr. (Wye).  |  |                            |
| Mohamed el Mahdi Musa.  |  |                            |
| Mohamed Ali Babiker.  |  |                            |
| C. E. Wilson, B.A., Dip.Agr. (Cantab.) : control of bird damage to crops in the central rainland areas.   |  | 6, 13, 14                  |
| F. W. Fisher, Dip.R.H.S.,<br><i>Inspector of Pomology.</i>  | concerned with development of date, citrus and other fruit industries and of gardens including experimental and research work.   | 2, 9, 27, 29,<br>30        |
| J. Robbie, <i>Inspector of Horticulture.</i>  |  |                            |
| L. B. Thrower, B.Sc.<br>(Hort.), <i>Inspector of Horticulture.</i>  |  |                            |
| J. H. K. Jefferson, B.A. (Oxon.), <i>Soil Conservation Officer</i> : in charge of all problems and projects for soil conservation and for rural water supplies including surface storage. |  | 2, 26, 27,<br>28, 29       |

**GORDON MEMORIAL COLLEGE**

Khartoum.

**School of Agriculture**

|   |            |
|---|------------|
| Shambat, Khartoum North. (Tel. : Khatoum 2874). |            |
| B. M. Boyns, B.Sc., Ph.D., <i>Dean.</i>         | 15, 17, 24 |
| L. S. Cobley, B.Sc., A.I.C.T.A.                 | 3, 20, 22  |
| H. S. Darling, B.Sc., B.Agr., A.I.C.T.A.        | 19         |
| J. L. Read, B.Sc.                               | 14, 17     |
| M. Abdel Karim, Dip.Agr. (seconded).            | 7, 12      |

**School of Veterinary Science**

|   |        |
|---|--------|
| Khartoum. (Tel. : Khartoum 2494).                     |        |
| J. B. Polding, Ph.D., B.Sc., M.R.C.V.S., <i>Dean.</i> | 16, 22 |
| M. A. A. El Hagri, B.Sc., F.R.C.V.S.                  | 13     |
| A. G. Warren, B.Sc., M.R.C.V.S.                       | 13, 16 |



# AGRICULTURAL RESEARCH DIVISION

|  |              |
|--|--------------|
| R. C. Maxwell Darling, B.A., <i>Chief of Research Division.</i>  | 1, 19        |
| H. Ferguson, B.Sc. (Agr.), N.D.A., N.D.D., <i>Chief Agronomist.</i>                                      | 2, 3         |
| P. de Schlippe, Agr. Eng. (Gembloux), <i>Senior Research Officer, Yambio.</i>                            | 2, 3         |
| S. Gray, B.Sc., Dip.Agr.Sc. (Cantab.), Dip.Agr., A.I.C.T.A., <i>Agronomist.</i>                          | 2, 3         |
| M. C. Hattersley, <i>Farm Manager.</i>   | 7, 8, 12, 14 |
| K. R. M. Anthony, B.Sc., A.I.C.T.A., <i>Agronomist, Yambio.</i>  | 2, 3         |
| F. W. Andrews, D.Sc. (Lond.), Ph.D., A.R.C.S., <i>Chief Economic Botanist.</i>                           | 3, 6, 12, 20 |
| S. A. J. Tarr, B.Sc., <i>Plant Pathologist.</i>  | 6, 20, 22    |
| K. W. Jones, M.Sc., <i>Economic Botanist.</i>  | 3, 12        |
| R. J. V. Joyce, M.Sc., <i>Government Entomologist.</i>   | 19           |
| W. S. Richards, M.A., D.Ph. (Oxon.), <i>Entomologist.</i>  | 19           |
| Bashir El Shafie, <i>Inspector, Pest Control.</i>  | 19           |
| R. R. Anson, <i>Chief Cotton Breeder.</i>  | 4            |
| R. L. Knight, M.Sc. (Agr.), D.Sc., Ph.D., A.I.C.T.A., Dip.Agr. (Wye), <i>Senior Economic Genetecist.</i> | 4            |
| M. F. Rose, M.A. (Cantab.), A.I.C.T.A., <i>Senior Cotton Breeder.</i>                                    | 4            |
| K. W. Barlow, <i>Cotton Breeder.</i>   | 4            |
| C. G. Webster, <i>Inspector, Plant Propagation.</i>  | 7, 8         |
| T. N. Jewitt, Ph.D., B.A., <i>Chief Chemist (Soil Research).</i>   | 2, 24        |
| T. A. Jones, B.Sc., A.R.I.C., <i>Chemist (Soil Research).</i>  | 2, 24        |
| K. R. Middleton, B.Sc., A.R.I.C., <i>Chemist (Soil Research).</i>  | 2, 24        |

# FORESTRY DIVISION

|   |   |    |
|---|---|----|
| W. L. Marjoribanks, B.Sc., <i>Chief Conservator of Forests</i> : has charge of forestry and forest products experimental and research work, including forest introductions. | 10, 11  |    |
| I. C. Barlas, B.Sc., <i>Conservator</i> .   | } concerned with experimental plantations in riverain forest.   | 10 |
| T. H. Kipling, B.A., Dip.For., <i>Asst. Conservator</i> .   |   |    |
| A. B. Rubidge, B.A., Dip.For., <i>Asst. Conservator</i> : concerned with experimental irrigated plantations.  |   | 10 |
| G. H. D. Williams, B.Sc., <i>Asst. Conservator</i> : in charge of forest herbarium.   |   | 10 |
| M. P. Vidal Hall, B.A., Dip.For., <i>Conservator</i> .  | } concerned with research in control of grass fires and in the sylviculture of savannah woodland areas. | 10 |
| W. E. Marshall, <i>Conservator</i> .  |   |    |
| J. K. Jackson, B.Sc., <i>Asst. Conservator</i> .  |   |    |
| J. R. Neilson, B.A., Dip.For., <i>Asst. Conservator</i> .   |   |    |
| D. M. Ramsay, B.Sc., <i>Asst. Conservator</i> .   |   |    |
| G. A. Booth, B.Sc., <i>Asst. Conservator</i> .  |   |    |
| T. McL. Dow, B.Sc., <i>Asst. Conservator</i> .  |   |    |

# BRITISH MIDDLE EAST OFFICE, CAIRO

The development division of this Office includes a number of specialist officers whose services in their respective spheres are available in a consultative and advisory capacity to the Government of any Middle East country which may desire to avail of them.

|  |       |
|--|-------|
| Sir Herbert Stewart, C.I.E., M.Sc., F.R.C.Sc.I., D.I.C., N.D.A.,<br><i>Agricultural Adviser.</i> | 1     |
| V. K. Maitland, C.S.I., M.C., M.Sc. (Oxon.), <i>Forestry and Soil Conservation Adviser.</i>      | 1, 10 |
| J. Murray, M.A. (Hons. Edin.), Ph.D. (Yale), F.R.S.S., <i>Statistical Adviser.</i>               | 29    |
| A. R. Waterston, B.Sc., F.R.S.E., <i>Entomological Adviser.</i>                                  | 19    |
| T. Threlkeld, <i>Animal Husbandry Adviser.</i>   | 1, 18 |

# REPUBLIC OF IRELAND

## DEPARTMENT OF AGRICULTURE, DUBLIN

|   | Subject |
|---|---------|
| J. Mahony, B.Sc., A.R.C.Sc.I., <i>Chief Inspector.</i>                                      | 1       |
| J. F. Timoney, M.R.C.V.S. : veterinary research.  | 1       |
| H. A. Lafferty, D.Sc., F.R.C.Sc.I. : seed testing and economic botany.                      | 3       |
| A. Turner, B.Sc., A.R.C.Sc.I., N.D.H., H.Dip.Ed. : horticulture.                            | 9       |
| D. Delaney, B.Sc., A.R.C.Sc.I. : potato growing.  | 6       |
| T. Walsh, Ph.D., M.Agr.Sc. : soils ; chemistry and classification.                          | 2       |
| G. Van Berneveld Gilmour, Ph.D. (Lond.), B.Sc., A.R.C.Sc.I., F.I.C., <i>Bacteriologist.</i> | 22      |
| G. B. Cruess Callaghan, Ph.D., M.Sc., A.I.C., A.R.C.Sc.I., <i>Assistant Bacteriologist.</i> | 22      |
| Miss B. Murphy, M.Sc., H.Dip.Ed., <i>Assistant Analyst.</i>                                 | 22      |
| J. J. Brady, M.Agr.Sc. : plant husbandry.   | 12      |
| T. J. R. O'Sullivan, B.Agr.Sc. : experimental station.                                      | 1       |
| H. Hume, plant breeding.  | 4       |

## VETERINARY COLLEGE OF IRELAND, DUBLIN

|   |    |
|---|----|
| Prof. T. G. Browne, M.R.C.V.S., <i>Principal</i> : anatomy.                               | 1  |
| Prof. W. Kearney, M.R.C.V.S. : pathology and bacteriology.                                | 16 |
| Prof. A. F. O'Dea, M.R.C.V.S., D.V.S.M. : veterinary medicine and meat inspection.        | 22 |
| Prof. J. A. Nicholson, M.R.C.V.S., M.A., Ph.D. : veterinary physiology and bio-chemistry. | 13 |
| Prof. P. A. McGeady, M.R.C.V.S. : surgery.  | 13 |

## UNIVERSITY COLLEGE, DUBLIN

### Faculty of General Agriculture

#### DEPARTMENT OF GENERAL AGRICULTURE

##### (FIELD CROPS AND ANIMAL HUSBANDRY)

|   |   |
|---|---|
| Prof. J. P. Drew, M.Sc., A.R.C.Sc.I.                  | } technique of crop production including 1, 14, 17,<br>selection of varieties and fertilizer re- 18<br>quirements ; preservation of grass and 2, 7, 8, 12,<br>other green fodder ; milk inheritance 27<br>in shorthorn cattle ; recording Irish<br>large white breed of pigs. 2, 7, 8, 12 |
| F. P. Hussey, B.Agr.Sc., A.R.C.Sc.I., B.Sc., (Econ.). |   |
| D. Deasy, B.Agr.Sc., Ph.D.                            |   |
| F. J. O'Connell.                                      |   |
|   | 12, 17  |

#### DEPARTMENT OF AGRICULTURAL BOTANY AND AGRICULTURAL BACTERIOLOGY.

|  |    |
|--|----|
| Prof. M. J. Gorman, B.Sc., A.R.C.Sc.I. : grassland ; seeds mix- 8<br>tures and management. |    |
| D. Slattery, B.Sc., N.D.A., A.R.C.Sc.I. : soil bacteriology.                               | 22 |

#### DEPARTMENT OF AGRICULTURAL CHEMISTRY

|                         |  |
|-------------------------|--|
| G. F. O'Sullivan, M.Sc. | } chemical advisory and analytical work 24<br>related to agricultural research problems. |
| D. Crowley, M.Sc.,      |  |
| H.Dip.Ed., A.R.I.C.     |  |



DEPARTMENT OF AGRICULTURAL ZOOLOGY.

|   |  |        |
|---|--|--------|
| J. Carroll, D.Sc., A.R.C.Sc.I.,<br>D.I.C., N.D.A. | } farm and horticultural insect pests;<br>eelworms—measures for control. | 19, 21 |
| E. McMahon, M.Sc., B.Agr.Sc.                      |  |        |

DEPARTMENT OF ANIMAL NUTRITION.

|   |   |    |
|---|---|----|
| Prof. E. J. Sheehy, D.Sc.,<br>F.R.Sc.I. | } herbage deficiencies ; optimum<br>dietary for pigs and poultry. | 15 |
| B. J. Senior, Ph.D., M.Sc.              |   |    |
| Miss E. M. Burke.                       |   |    |

DEPARTMENT OF HORTICULTURE

|  |   |
|--|---|
| G. O. Sherrard, B.Sc., A.R.C.Sc.I. : pomology ; vegetable breeding brassicas.                                | 9 |
| E. Clarke, Ph.D., B.Agr.Sc. : glasshouse crops ; tomatoes ; plant nutrition.                                 | 9 |
| J. G. D. Lamb, Ph.D., B.Agr.Sc. : classification of apple varieties ; breeding strawberries and raspberries. | 9 |

DEPARTMENT OF PLANT PATHOLOGY.

|  |       |
|--|-------|
| Prof. R. McKay, D.Sc., A.R.C.Sc.I. : general plant pathology ; virus diseases of plants.                     | 6, 22 |
| J. B. Loughnane, M.Sc., B.Agr.Sc., <i>Assistant Lecturer</i> : virus diseases of plants ; general pathology. | 6, 22 |
| P. Barry, B.Agr.Sc., <i>Assistant</i> : general plant pathology.   | 6     |

DEPARTMENT OF SOIL SCIENCE

|   |   |
|---|---|
| P. H. Gallagher, Ph.D. (Cantab.), D.Sc. : <i>Lecturer</i> . | 2 |
| W. J. Brickley, M.Agr.Sc., <i>Assistant</i> .               | 2 |

DEPARTMENT OF PLANT BREEDING

|  |  |   |
|--|--|---|
| Prof. M. J. Caffrey, B.Sc.,<br>A.R.C.Sc.I. | } the breeding of cereals, grasses and<br>clovers. | 4 |
| P. T. Carroll, M.Sc., B.Agr.<br>Sc.        |  |   |

DEPARTMENT OF FORESTRY

|  |    |
|--|----|
| Thomas Clear, B.Agr.Sc. : silviculture and nursery investigations ; growth and increment studies on exotic conifers especially Douglas fir, Silka spruce and Japanese larch. | 10 |
|--|----|

UNIVERSITY COLLEGE, CORK

|  |    |
|--|----|
| Prof. C. Boyle, M.A., Ph.D. (Lond.) : dairy husbandry.           | 14 |
| M. Grimes, M.Sc., Ph.D. : dairy bacteriology.                    | 14 |
| C. Murphy, B.Sc. (Dairying) : dairy bacteriology.                | 14 |
| J. Lyons, A.R.C.Sc.I., N.D.A., N.D.D., M.Sc. : dairy technology. | 14 |
| M.O'Shea, B.Sc. (Dairying), Ph.D. : dairy technology.            | 14 |
| G. T. Pyne, M.Sc., Ph.D., A.R.C.Sc.I., F.I.C. : dairy chemistry. | 14 |
| Declan T. McSweeney, M.Sc. : dairy chemistry.                    | 14 |
| J. J. Ryan, A.R.C.Sc.I., M.Sc. : dairy chemistry.                | 14 |
| F. A. McGrath, B.E., A.M.I.E.E. : dairy engineering.             | 14 |
| M. Murphy, M.A., B.Comm. : dairy accountancy.                    | 14 |



# C—INDEX OF SUBJECTS

(By Countries)



## KEY TO INDEX OF SUBJECTS

1. Directors and Superintendents of Agriculture, Forestry or Veterinary Science, Directors of General Agricultural Forestry or Veterinary Research Institutes or Experiment Stations.
2. Soils, Fertilisers, Plant Nutrition.
3. General Botany and Plant Physiology.
4. Plant Breeding.
5. Plant Chemistry.
6. Plant Pathology (not classified under 19—21.)
7. Arable Crops.
8. Grassland, Herbage and Fodder Plants.
9. Horticulture.
10. Forestry—Silviculture and Management.
11. Forest Products (Major and Minor) and Utilisation.
12. Plant Husbandry (not classified under 2—11 and including Seeds and Weeds).
13. Animal Anatomy and Physiology.
14. Animal Breeding.
15. Animal Nutrition.
16. Animal Pathology (not classified under 19—23).
17. Animal Production (including Dairying).
18. Animal Husbandry (not classified under 13—17).
19. Entomology.
20. Mycology.
21. Helminthology.
22. Bacteriology, Viruses and related Immunology.
23. Protozoology.
24. General Chemistry.
25. Biochemistry.
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